PLANNING COMMISSION

City of Holladay
June 25th, 2024
City Council Chambers – 4580 S. 2300 E. Holladay

City of Holladay

This public meeting will be held in-person and also transmitted via live video stream on the City of Holladay webpage. Participation in a *public hearing* portion of this meeting can be accomplished in either of the following ways:

- During the meeting: address the Commission when the item is called by the Commission Chair
- Email: comments must be received by 5:00 pm on **06/25/2024** to the Community and Economic Development Department; cmarsh@holladayut.gov. Emailed comments will be read by the Commission Chair.

MEETING AGENDA

5:30 PM **WORK SESSION –** The Commission may discuss any or all agenda items. No decisions or voting to occur.

6:00 PM **CONVENE REGULAR MEETING** – Public Welcome & Chair Opening Statement

PUBLIC HEARING

1. **"Brinton House" Historic Site Modification Permit— 1981 Murray-Holladay Road (R-M)**
   Review and consideration of a request by Applicant **Katie Thibodeaux**, representing Owner Roderick Enterprises, for modifications to a designated historic house and site. Item reviewed as an administrative, conditional use application as per provisions stated in Holladay Ordinance §13.08.040, §13.86.030 & §13.86.050 *File #24-2-05*

PLANNING COMMISSION TRAINING – Required Quarterly Training

ADJOURN

CERTIFICATE OF POSTING
I, Stephanie N. Carlson, the City Recorder of the City of Holladay, certify that the above agenda notice was posted on the City of Holladay bulletin board, the City website www.holladayut.gov, the Utah Public Notice website www.utah.gov/pmn, and was emailed to the Salt Lake Tribune and Desert News and others who have indicated interest.

DATE POSTED: Monday, June 24, 2024 at 10:00 am

Stephanie N. Carlson MMC, City Recorder
City of Holladay

Reasonable accommodations for individuals with disabilities or those in need of language interpretation service can be provided upon request. For assistance, please call the City Recorder's office at 272-9450 at least three days in advance. TTY/TDD number is (801)270-2425 or call Relay Utah at #7-1-1

Planning Commission
Community Development
Department City of Holladay
801.527.3890

CITY of HOLLADAY

FILE# 24-2-05 BRINTON HISTORIC MODIFICATIONS CUP

ADDRESS:

1981 S. Murray Holladay Road

LEGAL DESCRIPTION: *22-09-227-045*

BEG S 0^02'52" E 617.97 FT FR NE COR SEC 9, T 2S, R 1E, S L M; N 89^48' W 161 FT; N 0^02'52" W 316.6 FT M OR L; N 88^ 30' E 19.49 FT; S 47^ E 193.73 FT; S 0^02'52" E 186.68 FT M OR L TO BEG. 0.96 AC M OR L 4789-1421 5541-2763 5541-2765 6126-1897 6188-1 10092-3587

APPLICANT/REPRESENTATIVE:

Katie Thibodeaux

PROPERTY OWNER:

Roderick Enterprises

ZONING:

R-M

GENERAL PLAN DISTRICT:

Mixed Use-No Retail (MU-NR)

CITY COUNCIL DISTRICT:

District #1

PUBLIC NOTICE DETAILS:

Mailed 05/22/2024

REQUEST:

Conditional Use Permit

APPLICABLE REGULATIONS:

13.86
13.08.040
General Plan - Mixed Use- No Retail

EXHIBITS:

Staff Report
Review and Recommendation Letter
Applicant Narrative
Applicant supporting doc.

STAFF:

Carrie Marsh, City Planner

DECISION TYPE:

Administrative:

Public hearing required. PC shall make a motion of either, denial, approval or to continue. All motions require findings which support the decision. As directed by ordinance, applications shall be approved if the Land Use Authority finds Substantial Evidence of compliance with applicable requirements. Holladay Ord. 13.06.050.B2 and 13.08

SITE VICINITY MAP

Notes:

CITY OF HOLLADAY
Planning Commission
June 25, 2024
Item #1

Request:	**CONDITIONAL USE PERMIT – HISTORIC SITE MODIFICATION**
Project	"Brinton House" Historic Home and Site Modifications
Address:	1981 E Murray Holladay Rd
Zone:	R-M
Applicant:	Katie Thibodeaux, representing Roderick Enterprises
File No:	24-2-05
Notice;	Mailed 05/24/2024; Hearing continued/open from 6/4/2024
Planner*:*	Carrie Marsh

GOVERNING ORDINANCES:	13.03.020	CONDITIONAL USE- SUBMITTAL REQUIREMENTS
	13.08.040	CONDITIONAL USE PERMIT REVIEW/APPROVAL STANDARDS
	13.86	HISTORIC PRESERVATION

REQUIRED PLANNING COMMISION ACTION TYPE

Administrative.
Public hearing required. PC shall make a motion of either, denial, approval or to continue. All motions require findings which support the decision. As directed by ordinance, applications shall be approved if the Land Use Authority finds Substantial Evidence of compliance with applicable approval standards and requirements. Holladay Ord. 13.08.040

EXCECUTIVE SUMMARY

The City of Holladay Code §13.86 addresses Historic Preservation within the City. This section of code designates sites and applies standards and additional uses specifically applicable to these sites. A conditional use permit is required for any modifications relating to the site or structure. Modifications are defined in §13.86.065 as: *"demolition or construction where a demolition or building permit is required. Modification also include substantial changes to landscape, fencing, or appearance of a historic site. Modification does not include minor changes to landscape, fencing, or appearance of a historic site such as painting the historic site substantially the same color, changes to flowerbeds, or trimming."*

Upon receipt of the application, it was reviewed by the Technical Review Committee and determined that the changes to the structure and site met the definition of modification within §13.86.065, requiring review by the Planning Commission for a Conditional Use Permit.

As designated in §13.86.050: SITE MODIFICATION, *"the Planning Commission may modify all yard, parking, landscaping, height, and other requirement of the zone in which the historic site is located, as necessary to fulfill the purposes of this chapter. In so doing, the nature and character of adjacent properties shall be considered to ensure that the health, safety, convenience, and general welfare will not be impaired. The Planning Commission may establish development criteria to control impacts associated with the heaviest permitted use in the base zone, including but not limited to: noise, glare, dust, or odor."*

BACKGROUND

Holladay has a number of historical properties and locations, though only five are designated within the City's Code as Historical Sites. A historical overview article by Jacob Barlow is included in the packet

for review and give a broader understanding of the historical significance of the property.
The following points are a brief summary of the property's history:

- The David Branson Brinton House is significant for its association with the lives of three locally prominent historical figures: David Brinton, David Branson Brinton, Sr. and David Branson Brinton, Jr., all of who played important roles in the growth and development of Holladay, Utah, one of the state's earliest settlements.
- Among the settlers of 1848-49 was David Brinton (1814-1878) and his family. The Brintons had historically been builders and blacksmiths.
- The home was built in 1877 by David Branson Brinton.
- Added to the National Historic Register May 22 1978, #78002665

A two-level addition to the rear of the original structure was added in 1979 with a secondary entrance. This addition is concealed behind the original structure from the street, but is visible while traveling west on Murray Holladay Road and abuts the parking lot.

APPLICANT / PROPERTY SUMMARY

Applicant, Katie Thibodeaux, representing the property owner, is seeking to modify some elements of the structure and site known as the "David Branson Brinton Home" in §13.86.020 of the City of Holladay Code, located at 1981 E. Murray Holladay Road. The applicant is seeking to make the following modifications:

Existing Building:

1. Paint exterior window trim, railing, soffit, and fascia a darker color
2. Replace exterior doors on south (main) and east (side) entrances with black commercial/store glass doors,
    a. **REVISION: Modifications to doors shown in revised submission with additional fill work for more traditional appearance with visual weight.**
3. Add entrance canopy to east entrance
    a. **Clarified in previous meeting that "canopy" is a support beam, not canopy.**

Site Landscaping:

1. Tree removal/trimming
    a. Remove two front trees
    b. Trim mature trees on east, north, and south property lines
        i. REVISION: No tree trimming on property line trees as they are not on the property.
    c. Removal of aspens on the east and north sides of the building. Replace with columnar evergreen trees
        i. **REVISION includes: new trees/landscaping in area where detached garage is located, to be demolished. See new landscaping plan.**
2. Fencing to be removed and replaced
    a. REVISION: No fence replacement as fencing is not on property.

Site Modifications:

1. Demolition of detached garage and carports
2. New detached garage on the rear corner of property
    a. **REVISION: includes architectural detailing on new building that will match architectural features on historical structure and addition.**
3. Parking lot modifications – Remaining parking spaces meet requirements of spaces for office use.

TECHNICAL REVIEW COMMITTEE RECOMMENDATION

The Technical Review Committee (TRC) finds that the application for a conditional use permit for minor building and landscaping modification to a site listed on the Holladay Historic Preservation to be complete.

The TRC recommends the PC to hold the required public hearing (as required 13.08.040). Public comments made should be considered as they relate to the set approval standards and mentioned above. Additional considerations or conditions, if any, should be applied carefully and reasonably as per 13.08.040.F. The Holladay TRC has provided their suggesting findings and conditions to consider.

Suggested Findings:

1. Modifications to the building and site are considered to be substantial as defined by 13.86.050

2. Proposed modifications, overall, do not detract from the historic nature of the building's architecture.
3. The detached garage was built in 1953 and is not found to be relevant to the David Brinton House's formal historic designation.
4. The structure's rear addition was added in 1979 and while not an original part of the structure, there is a transition between the original structure and the addition.
5. Required on-site parking for the property's use is met

Suggested Conditions of Approval:

1. Painting of window trim, fascia, and railing to be dark paint, as proposed
2. Modern doors with traditionally styled fills for visual weight are considered appropriate
3. Landscaping plan showing replacement trees in accordance with Holladay code §13.77.060
4. Demolition of existing garage and carports appropriate as not historically relevant to the property
5. New garage design to feature architectural features found in the main home and 1979 addition.
6. No addition of lighting within the parking lot

SUGGESTED MOTION FORMAT:

"I motion the Holladay Planning Commission move to _____ (APPROVE, DENY, CONTINUE) the application for a ***Conditional Use Permit*** *for* ***a Historic Site Modification*** *for the* ***"David Branson Brinton Home",*** *designated as a historic site by section 13.86.020 of the City of Holladay code, located at* ***1981 E. Murray Holladay Road.*** *Based upon the findings that the application _____ (see above for staff suggested findings .This motion is subject to the following conditions_____ (see above for staff suggested conditions"*

Roderick HQ
Historical Site Changes

Building Changes:

Painting:

- Exterior Painting of windows, railing, soffit and fascia
  - We are proposing to paint the existing window frame, handrail, soffit and fascia black color on the existing mansion and replacing the windows on the addition. All new windows on the addition will look exactly the same architecturally as they do now with mullions and curved arches.

Doors/Entrances:

- Currently the exterior doors are a yellow wood color.
  - We are proposing to replace the South and East Entrances with Class A High End Store Front Glass Systems.

Landscape Changes:

Tree Removal and Replacement:

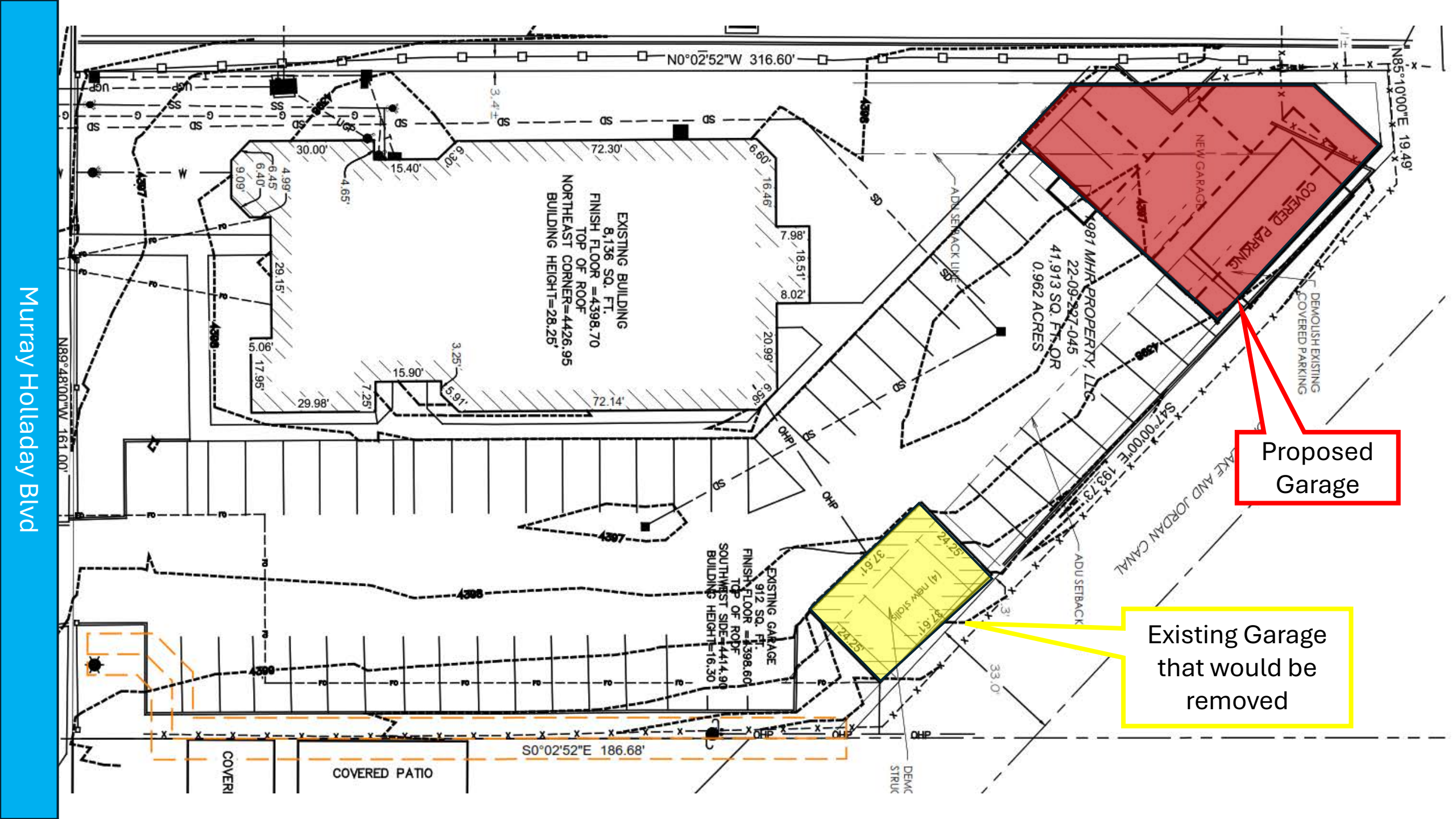
- A new landscaping plan has been provided and abides by the current landscaping code for Holladay City.

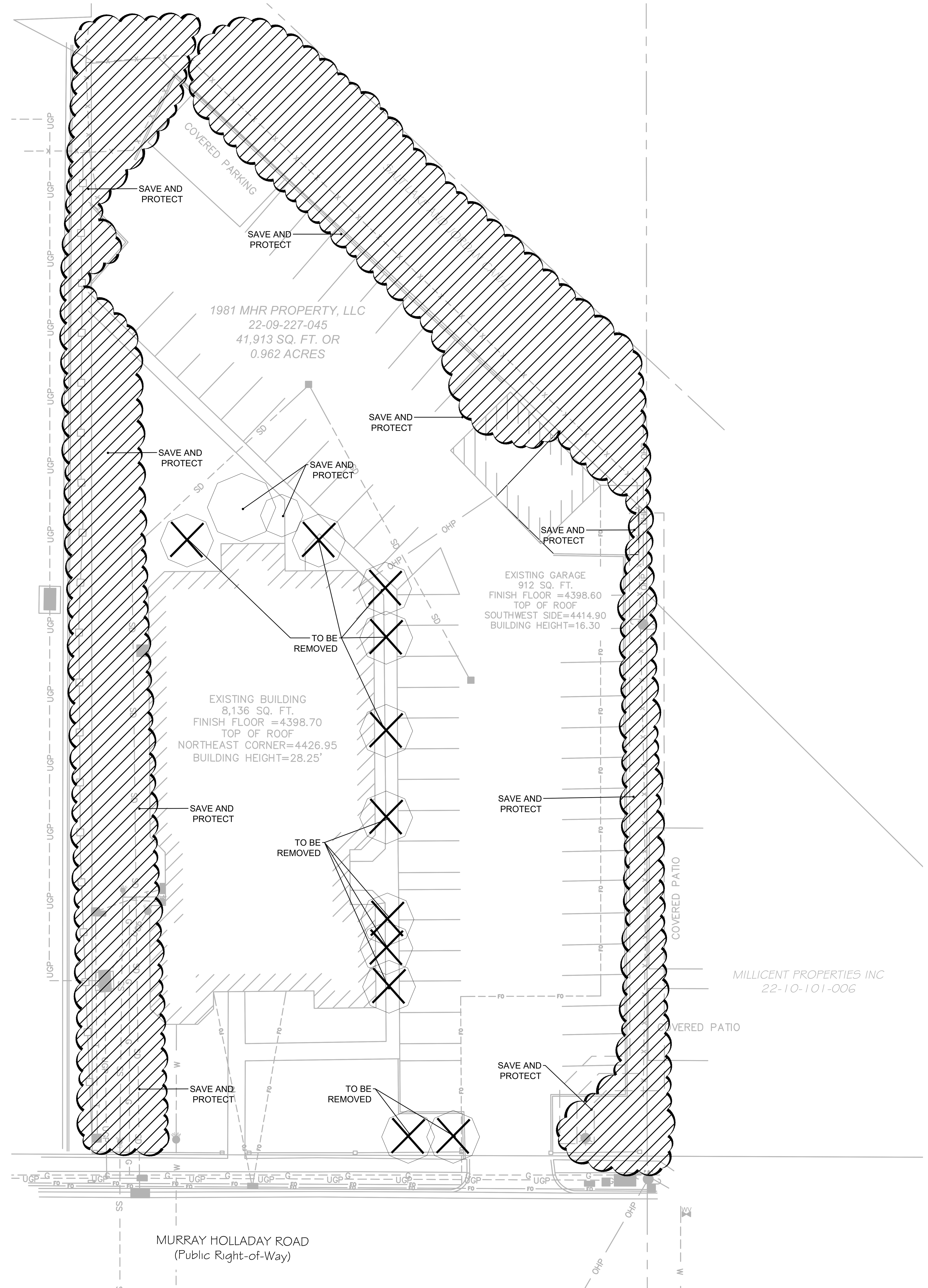
Garage Relocation:

The Current garage can be seen from Murray Holladay Blvd and does not have and tie into the historical nature of the site. We would demo the existing garage and relocate in the NE corner of the property away from the view of Murray Holladay Blvd and construct with the same brick, roof and architecture as the existing office building.

Existing Condition:

Existing Condition:


Murray Holladay Blvd
N0°02'52"W 316.60'
N85°10'00"E 19.49'
EXISTING BUILDING
8,136 SQ. FT.
FINISH FLOOR =4398.70
TOP OF ROOF
NORTHEAST CORNER=4426.95
BUILDING HEIGHT=28.25'
981 MHR PROPERTY, LLC
22-09-227-045
41,913 SQ. FT. OR
0.962 ACRES
NEW GARAGE
COVERED PARKING
DEMOLISH EXISTING COVERED PARKING
ADU SETBACK LINE
Proposed Garage
EXISTING GARAGE
912 SQ. FT.
FINISH FLOOR =4398.60
TOP OF ROOF
SOUTHWEST SIDE=4414.90
BUILDING HEIGHT=16.30
(4) NEW STALLS
Existing Garage that would be removed
S47°00'00"E 193.73'
JORDAN CANAL
N89°48'00"W 161.00'
S0°02'52"E 186.68'
COVERED PATIO



EXISTING AND NEW LANDSCAPE AREA

SYMBOL	SITE MATERIAL
	EXISTING TREES TO REMAIN AND TO PROTECT
	EXISTING TREES TO BE REMOVED

EXISTING TREE NOTES

TREE PROTECTION AND PRESERVATION

INTRODUCTION: THIS IS INTENDED TO GUIDE THE GENERAL CONTRACTOR AND SUB-CONTRACTORS CREWS AND OWNER IN THE PROTECTION OF TREES LOCATED ON PROJECT SITE, AND SHALL BE IN COMPLIANCE WITH FOLLOWING SPECIFICATIONS. ALL PEOPLE THAT WORK AROUND TREES ARE RESPONSIBLE TO PROTECT THE TREES FROM UNNECESSARY INJURY THAT WOULD DECREASE THEIR VALUE. TREE ROOTS OFTEN SPREAD 2-3 TIMES WIDER THAN THE DRIP-LINE OF THE CANOPY AND 90% OF A TREE'S ROOTS ARE FOUND IN THE TOP 2 FEET OF SOIL. THESE FACTS ILLUSTRATE WHY IT IS SO IMPORTANT TO USE CARE WHEN WORKING NEAR EXISTING TREES.

A. TREE PROTECTION GUIDELINES FOR CONSTRUCTION SITES

PRIOR TO INITIATION OF DEMOLITION AND CONSTRUCTION WORK THAT WILL AFFECT TREES ON PROPERTY, THE FOLLOWING TREE PROTECTION PLAN SHOULD BE IMPLEMENTED, WHICH PROVIDES FOR THE FOLLOWING INFORMATION:

1. TREE PROTECTION PRACTICES MAY INCLUDE, BUT ARE NOT LIMITED TO: PRUNING BRANCHES AND ROOTS, TEMPORARILY FENCING OFF AREA AROUND THE ROOTING ZONE, WRAPPING TRUNKS TO PREVENT WOUNDS, SPREADING WOOD CHIPS OR GRAVEL TO REDUCE SOIL COMPACTION, ENSURING PROPER TREE IRRIGATION IS PROVIDED THROUGHOUT THE TERM OF THE PROJECT, AND ADDING WELL-COMPOSTED ORGANIC MATTER TO THE TREE'S GROWING LOCATION FOLLOWING CONSTRUCTION.
2. TREE PLANTING WORK SHALL BE DONE IN ACCORDANCE WITH LATEST LOCAL CODES, IE: BEST MANAGEMENT PRACTICES (BMP), ANSI Z133.1, AND ANSI A300. DIRECTIONS PROVIDED IN AUTHORIZING PERMITS SHALL BE FOLLOWED.
3. ANY TREE TO REMAIN THAT IS IRREPARABLY DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REMUNERATED AT COST TO CONTRACTOR RESPONSIBLE FOR DAMAGES. THE VALUE OF ALL TREES TO REMAIN SHALL BE ESTABLISHED IN WRITING AND AGREED UPON BY ALL PARTIES INVOLVED PRIOR TO CONSTRUCTION ACTIVITIES.
4. ANY TREES TO REMAIN ON-SITE AND ON ADJACENT PROPERTIES THAT ARE DAMAGED DUE TO CONSTRUCTION ACTIVITIES THAT ARE REPLACEABLE SHALL BE REPLACED WITH TREE OF SAME SPECIES, CALIPER SIZE AND SIMILAR SHAPE AT THE EXPENSE OF CONTRACTOR RESPONSIBLE FOR DAMAGE.
5. TREES BEING PRESERVED DURING ALL CONSTRUCTION ACTIVITIES SHALL HAVE A TREE PROTECTION ZONE (TPZ), WHICH IS NO LESS THAN THE WIDTH OF THE DRIP LINE OF THE TREES CANOPY, CLEARLY MARKED WITH A CONTINUOUS CHAIN LINK PROTECTIVE FENCE, OR OWNER APPROVED EQUAL, PRIOR TO ANY DEMOLITION, CLEARING, TRENCHING OR TUNNELING PROJECTS COMMENCEMENT.
6. HEAVY EQUIPMENT SHALL NOT BE ALLOWED INSIDE THE TREE PROTECTION ZONE. ALL HEAVY EXCAVATIONS SHALL BE MADE BY EQUIPMENT FROM OUTSIDE OF THIS ZONE.
7. BUILDING MATERIAL, TOPSOIL, CHEMICALS, OR FILL SHALL NOT BE STOCKPILED IN THE TREE PROTECTION ZONE OR IN THE DRIP-LINE OF ANY TREE THAT IS SCHEDULED FOR PRESERVATION.
8. PRIOR TO CONSTRUCTION, THE TREE PROTECTION ZONE WILL BE DESIGNATED BY PLAN AND IN COORDINATION WITH BLUE STAKES, OWNER, LANDSCAPE ARCHITECT AND/OR CITY URBAN FORESTER. THE SIZE AND SHAPE OF THE ZONE WILL DEPEND ON THE TREE SPECIES SENSITIVITY TO IMPACT, THE HEALTH AND AGE OF THE TREE, AND ROOT AND CROWN CONFORMATION AND DEVELOPMENT CONSTRAINTS.
9. TRENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH THE STANDARDS LISTED ABOVE. WHEN LARGE SCAFFOLD ROOTS ARE ENCOUNTERED WHILE TRENCHING, HAND DIGGING AND BRIDGING OF THE ROOTS SHALL BE DONE. IN SITUATIONS WHERE A ROOT HAS BEEN DAMAGED, A CLEAN CUT SHALL BE MADE ON THE ROOT AT THE EDGE OF THE TRENCH CLOSEST TO THE TREE TRUNK.
10. TUNNELING OR BORING SHOULD BE DONE WHENEVER WORK MUST BE DONE WITHIN THE TREE PROTECTION ZONE. TUNNELING OR BORING IN THE TREE PROTECTION ZONE MUST BE AT LEAST 2 FEET DEEP.
11. EXCAVATION INVOLVING ROOT CUTS SHOULD BE DONE RAPIDLY. CUTS ON TREE ROOTS SHALL BE SMOOTH AND CLEAN. THE TRENCH SHOULD BE BACKFILLED AS QUICKLY AS POSSIBLE TO PREVENT THE EXPOSED ROOTS FROM DRYING OUT AND THE TREE SHOULD BE WATERED IMMEDIATELY. IF TREES ARE TO REMAIN EXPOSED FOR MORE THAN FOUR TO SIX HOURS, THEY MUST BE COVERED WITH BURLAP AND KEPT MOIST AT ALL TIMES.
12. FOR TREES WITH A TRUNK DIAMETER IN EXCESS OF SIX INCHES, TUNNELING OR BORING SHOULD REPLACE TRENCHING ACCORDING TO THE FOLLOWING MINIMUM DISTANCES FROM THE FACE OF THE TREE TRUNK IN ANY DIRECTION.
13. THE BOOKLET "TRENCHING AND TUNNELING NEAR TREES" THAT IS PRODUCED BY THE NATIONAL ARBOR DAY FOUNDATION SHALL BE USED AS A GUIDE FOR ALL CONSTRUCTION AND EXCAVATION WORK AROUND TREES. THIS BOOKLET MAY BE OBTAINED BY CONTACTING THE NATIONAL ARBOR DAY FOUNDATION.
14. TREE CARE CONTRACTOR PROVIDING SERVICES SHOULD BE CURRENTLY LICENSED TO DO BUSINESS IN THE STATE OF THE PROJECT, INSURED AGAINST PERSONAL INJURY AND PROPERTY DAMAGE, AND CERTIFIED AS AN ARBORIST WITH THE INTERNATIONAL SOCIETY OF ARBORICULTURE. PRIOR TO BEGINNING WORK ON TREE(S) THE TREE CARE CONTRACTOR SHALL CONTACT THE CITY'S URBAN FORESTRY DIVISION TO RECEIVE AN AUTHORIZING PERMIT IF REQUIRED.
15. TREES SHALL NOT BE USED TO SUPPORT ANY SCAFFOLDING, SIGNS, TEMPORARY UTILITY, OR ANY OTHER DEVICE. SIDEWALKS AND PAVING LEVELS SHOULD BE CONTOURED WHENEVER POSSIBLE TO AVOID ROOT CUTTING. IF DAMAGE OCCURS TO A PROTECTED TREE, IMMEDIATE CONTACT SHALL BE MADE WITH THE CITY FORESTER IN ORDER THAT WOUNDS CAN BE TREATED.
16. NO ELEVATION OR GRADE CHANGES CAN BE MADE AROUND THE DRIP ZONE OF THE TREES UNLESS WRITTEN APPROVAL IS GIVEN BY THE OWNER, LANDSCAPE ARCHITECT AND RECEPTION OF A ELEVATION/GRADE CHANGE PLAN.
17. EXCEPTIONS TO THE ABOVE GUIDELINES SHALL BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION.
18. TREES SHALL BE WATERED ACCORDING TO THE FOLLOWING GUIDELINES:
    a. ESTABLISHED TREES NEED DEEP WATERING ONCE A WEEK WITH LOW PRESSURE TO ENSURE THAT THE GROUND IS SOAKED TO A DEPTH OF AT LEAST 12 INCHES.
    b. YOUNG OR NEWLY PLANTED TREES NEED TO BE WATERED EVERY 3-4 DAYS.
    c. TO KEEP WATER FROM EVAPORATING FROM THE SOIL AROUND THE TREE, APPLY AT LEAST TWO OR MORE INCHES OF ORGANIC MULCH (WOOD CHIPS OR MULCH) AROUND THE BASE OF THE TREES UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.

B. UNDERGROUND UTILITY WORK

1. TRENCHING SHOULD BE PERFORMED IN A MANNER AND LOCATION LEAST DAMAGING TO TREE ROOTS.
2. TUNNELING OR BORING SHOULD BE DONE WHENEVER POSSIBLE WHERE LARGE SCAFFOLD ROOTS ARE ENCOUNTERED, HAND DIGGING AND BRIDGING OF ROOTS SHALL BE DONE.
3. ANY CUTTING OF TREE ROOTS, OTHER THAN WHEN IN THE PROCESS OF TREE REMOVAL, SHALL GIVE DUE CONSIDERATION TO FUTURE WELFARE OF THE TREE. PROPER ACTION SHALL BE TAKEN SO AS TO PROTECT, PRESERVE, OR CORRECT THE ROOT PROBLEM.
4. THE "TRENCHING AND TUNNELING NEAR TREES" BOOK BY THE NATIONAL ARBOR DAY FOUNDATION SHALL BE USED AS A GUIDE FOR ALL CONSTRUCTION AND EXCAVATION WORK AROUND PROTECTED TREES.
5. EXCAVATION INVOLVING ROOT CUTS SHOULD BE DONE RAPIDLY. CUTS ON TREE ROOTS SHALL BE SMOOTH, AND CLEAN. BACKFILL BEFORE THE ROOTS HAVE A CHANCE TO DRY OUT, AND WATER TREE IMMEDIATELY. IF TREE ROOTS ARE TO REMAIN EXPOSED FOR ANY EXTENDED PERIOD OF TIME, THEY MUST BE COVERED WITH BURLAP AND KEPT MOIST AT ALL TIMES.

PURPOSE: THESE NOTES ARE INTENDED TO GUIDE GENERAL CONTRACTOR AND SUB-CONTRACTORS CREWS IN THE PRUNING AND REMOVAL OF EXISTING TREES AND BE IN COMPLIANCE WITH LOCAL STANDARDS.

C. GENERAL STANDARDS FOR TREE PRUNING

1. ALL TREE MAINTENANCE WORK ON PROPERTY GROUNDS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISIONS OF ANSI A300 AND ANSI Z133.1 STANDARDS AND AS FURTHER DETAILED IN THE BEST MANAGEMENT PRACTICES TREE PRUNING BOOKLET.
2. ALL TREE PRUNING TO BE COMPLETED BY A LICENSED ARBORIST IN THE STATE OF THE PROJECT.
3. HANGING LIMBS AND BRANCH GROWTH SHALL BE MAINTAINED 13 FEET ABOVE STREETS AND 8 FEET ABOVE SIDEWALKS OR PER LOCAL CODE.
4. AUTHORITY TO PRUNE TREES DOES NOT INCLUDE THE CUTTING BACK OF SOUND, HEALTHY TREE BRANCHES IN EXCESS OF 6 INCHES OUTSIDE DIAMETER, UNLESS SPECIFICALLY DIRECTED BY THE OWNER OR CITY FORESTER.
5. TREE BRANCHES SHALL BE REMOVED AND CONTROLLED IN SUCH A MANNER AS NOT TO CAUSE DAMAGE TO OTHER PARTS OF THE TREE, OTHER PLANTS, AND PROPERTY.
6. CLEAN-UP BRANCHES, LOGS OR ANY OTHER DEBRIS RESULTING FROM A TREE PRUNING OR REMOVAL SHALL BE PROMPTLY AND PROPERLY ACCOMPLISHED. THE WORK AREA SHALL BE KEPT SAFE AT ALL TIMES UNTIL THE CLEAN-UP OPERATION IS COMPLETED. UNDER NO CONDITION SHALL THE ACCUMULATION OF BRUSH, BRANCHES, LOGS, OR OTHER DEBRIS BE ALLOWED UPON PROPERTY IN SUCH A MANNER AS TO CAUSE A PUBLIC HAZARD.
7. THE USE OF CLIMBING SPURS OR GAFFS SHALL BE PERMITTED ONLY IN THE CASE OF TREE REMOVAL OR IN AERIAL RESCUE EMERGENCIES.
8. UNDER NO CONDITIONS SHALL IT BE CONSIDERED PROPER TO LEAVE SEVERED OR PARTIALLY CUT LIMBS IN A TREE AFTER THE WORKERS LEAVE THE SCENE OF OPERATIONS.
9. ALL TREES TO BE REMOVED SHALL BE TAGGED FOR OWNERS APPROVAL PRIOR TO REMOVING.

D. TREES SHALL BE REMOVED IF:

1. THE TREE INTERFERES WITH OR CREATES A PUBLIC NUISANCE OR HAZARD TO PEDESTRIANS OR VEHICULAR TRAFFIC OR IS CONSIDERED A PUBLIC NUISANCE BY THE CITY FORESTER.
2. THE TREE IS SIGNIFICANTLY DAMAGED OR DISEASED.
3. THE TREE IS SPECIFIED TO BE REMOVED ON THIS PLAN.
4. THE OWNER REQUESTS REMOVAL OF TREE. IN THIS CASE THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED SO AS TO REVISE THE PROPOSED PLANTING PLAN TO MEET CITY/COUNTY REQUIREMENTS FOR TREE REPLACEMENT.

E. STUMP REMOVAL REQUIREMENTS AND STANDARDS

1. PERSONS PERFORMING STUMP REMOVAL DUTIES SHALL HAVE THE IMMEDIATE AREA INVESTIGATED FOR UTILITY LINES FROM BLUESTAKES/DIG-LINE AS NECESSARY AND WEAR ALL REQUIRED SAFETY EYE AND EAR PROTECTION.
2. ALL REMOVAL OF TAGGED TREES SHALL BE DONE IN A MANNER SO THAT THE REMAINING STUMP WILL BE AT LEAST 8 INCHES BELOW GROUND LEVEL UNLESS OTHERWISE DIRECTED BY OWNER.
3. EXCAVATIONS RESULTING FROM A TREE OR SHRUB REMOVAL MUST BE PROMPTLY FILLED IN TO NORMAL GROUND LEVEL WITH TOPSOIL APPROVED BY OWNER OR FILL MATERIAL DEPENDING ON LOCATION. THE TOPSOIL/FILL MATERIAL SHALL BE PROPERLY SETTLED AND BE FREE OF DEBRIS.

ISSUE DATE: 6/18/2024
PROJECT NUMBER: UT24082

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' x x x x
GRAPHIC SCALE: 1" = x

PROJECT INFORMATION

HOLLADAY PROJECT
1981 E. MURRAY HOLLADAY RD.
HOLLADAY, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

RODERICK ENTERPRISES
ATT: BENJAMIN WHATON
801-506-5005
BENW@RODERICKREALTY.COM

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture · Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

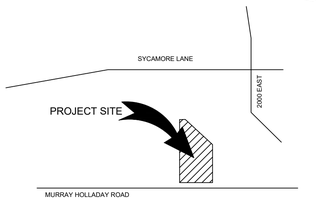
LICENSE STAMP
LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128121-5301
6/18/2024
STATE OF UTAH

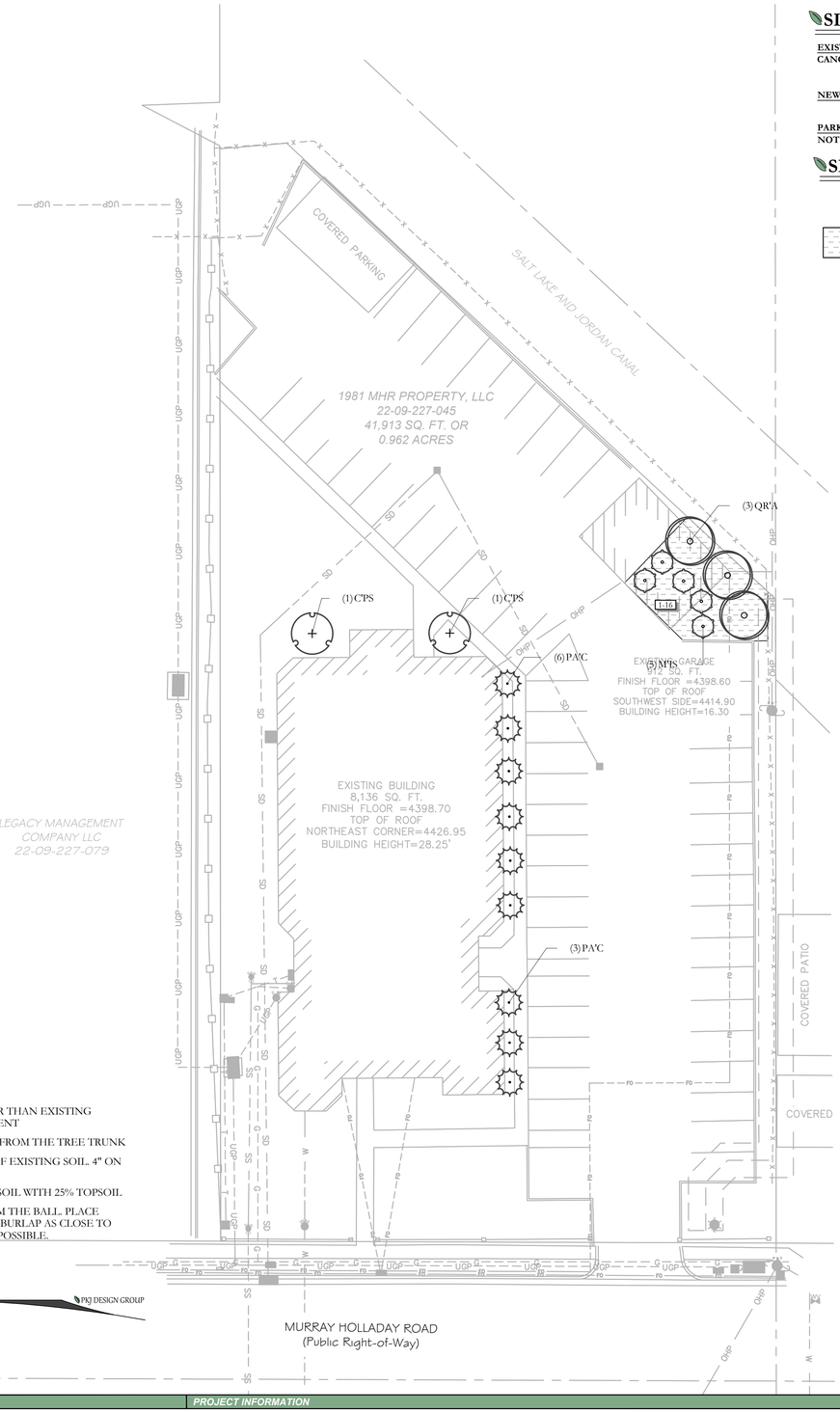
DRAWING INFO
PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 6/18/2024

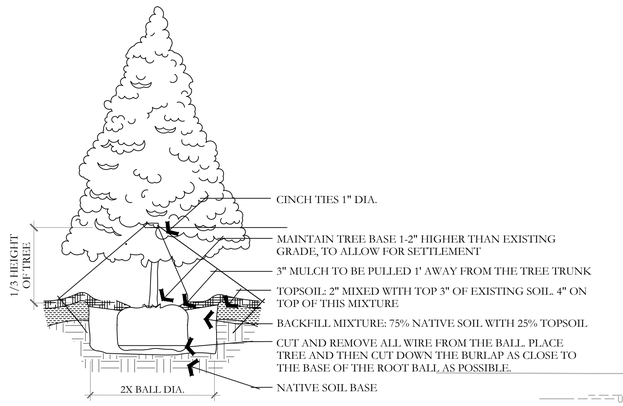
EXISTING TREE PLAN
CITY PERMIT SET

LP-EX

VICINITY MAP







B EVERGREEN TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP

SITE REQUIREMENT CALCULATIONS

EXISTING TREES TO BE REMOVED
CANOPY INVENTORY — **11 TREES** — **CANOPY SQ. FT. 881**

NEW TREES — **19 TREES** — **ESTIMATED CANOPY SQ. FT. AT MATURITY: 1,223**

PARK STRIP TREES:
NOT RECOMMENDED DUE TO PRESENCE OF UNDERGROUND UTILITIES

SITE MATERIALS LEGEND

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1-16	1" MINUS BROWN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 3" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	920 sf

PLANT LEGEND

(NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.) IF YOU NEED HELP WITH A WATER AUDIT CONSULTATION, OR A PLANT MAINTENANCE SCHEDULE, CONTACT PKJ@PKJDESIGNGROUP.COM

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CONIFERS						
	PA'C	9	Picea abies `Cupressina` Columnar Norway Spruce Tc3; 30'x10'; AV 490; sun; z2	B & B		7'-8'
DECIDUOUS TREES						
	C'PS	2	Celtis occidentalis 'JFS-KSU1' Prairie Sentinel® Hackberry Low water; 45' x 12'; sun to part shade; Z4; Utah Lake water tolerant	B & B	3"Cal	
	M'IS	5	Malus x 'JFS KW214MX' Ivory Spear® Crabapple Moderate to low water; 15-20' x 7'; sun; z4; Utah Lake water tolerant	20 gal.	1.75"Cal	
	QR'A	3	Quercus robur x alba `JFS-KW1QX` TM Street Spire Oak Td4; 45x14; AV 176; sun; z4	B & B	2"Cal	

GENERAL LANDSCAPE NOTES

GRADING AND DRAINAGE REQUIREMENTS

- AS PER CODE, ALL GRADING IS TO SLOPE AWAY FROM ANY STRUCTURE. SURFACE OF THE GROUND WITHIN 10' FEET OF THE FOUNDATION SHOULD DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6"
- AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
- A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
- LANDSCAPE CONTRACTOR TO MAINTAIN OR IMPROVE FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY EXCAVATOR, INCLUDING BUT NOT LIMITED TO ANY MAINTENANCE, PRESERVATION, OR EXAGGERATION OF SLOPES, BERMS, AND SWALES.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
- DEVICES FOR CHANNELING ROOF RUN-OFF SHOULD BE INSTALLED FOR COLLECTION AND DISCHARGE OF RAINWATER AT A MINIMUM OF 10' FROM THE FOUNDATION, OR BEYOND THE LIMITS OF FOUNDATION WALL BACKFILL; WHICHEVER DISTANCE IS GREATER

GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
- DURING THE BIDDING AND INSTALLATION PROCESS, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS. IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
- ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO ANSI STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
- SELECTED PLANTS WILL BE ACCORDING TO THE PLANT LEGEND. IF SUBSTITUTIONS ARE NECESSARY, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO LAYING SOD.
- SHOULD THE SITE REQUIRE ADDITIONAL TOPSOIL, REFER TO SOIL TEST WHEN MATCHING EXISTING SOIL. IF A MATCHING SOIL IS NOT LOCATABLE, A 6" DEPTH OF SANDY LOAM TOPSOIL (MIXED PRIOR TO SPREADING WITH 1% ORGANIC MATTER) CAN BE INCORPORATED INTO THE EXISTING SOIL USING THE FOLLOWING DIRECTIONS: SCARIFY TOP 6" OF EXISTING SUBSOIL AND INCORPORATE 3" OF NEW COMPOST ENRICHED TOPSOIL. SPREAD REMAINING TOPSOIL TO REACH FINISHED GRADE.
- EDGING, AS INDICATED ON PLAN, IS TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS. ANY TREES LOCATED IN LAWN MUST HAVE A 4-6' TREE RING OF THE SAME EDGING.

LAWN/GRASS AREA

- SOD
  - O ALL LAWN AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED HYDROSEEDING. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD ALL LAWN AREAS SHALL BE IRRIGATED WITH 100% COVERAGE BY POP-UP SPRAY HEADS AND GEAR-DRIVEN ROTORS. ALL DECIDUOUS AND CONIFER TREES PLANTED WITHIN SOD AREAS SHALL HAVE A FOUR FOOT(4') DIAMETER TREE RING COVERED WITH CHOCOLATE BROWN BARK MULCH, NO SHREDDED FINES. SUBMIT SAMPLES TO BE APPROVED BY LANDSCAPE ARCHITECT AND OWNER BEFORE INSTALLATION.
- SEED
  - O **SOIL:** TEST SOIL FOR ADEQUATE FERTILITY. ANY WEEDS CURRENTLY ON THE SITE SHALL BE REMOVED BY EITHER MECHANICAL MEANS SUCH AS HAND PULLING OR SPRAYING WITH AN HERBICIDE SUCH AS GLYPHOSATE MIXED WITH A SURFACTANT. HERBICIDES SHOULD BE APPLIED BY A CERTIFIED PESTICIDE APPLICATOR. COMPACTED SOIL SHALL BE SCARIFIED TO A DEPTH OF 18 INCHES BEFORE ADDING 6" OF WEED FREE TOPSOIL WITH HIGH ORGANIC MATTER. FINE LEVEL ALL AREAS PRIOR TO HYDROSEEDING AND SET THE GRADE FOR POSITIVE DRAINAGE. TOPSOIL SHOULD BE SOFT AT TIME OF APPLICATION. FERTILIZER IS TO BE ADDED WHEN HYDROSEEDING. REFER TO SOIL TEST RESULTS AND HYDROSEEDING CONTRACTOR FOR APPLICATION RATES.
  - O **SEED**: USE SEED MIXES AS SPECIFIED BY LANDSCAPE ARCHITECT OF PURE LIVE SEED (PLS) ON A BASIS/ACRE. THE OPTIMUM TIME TO PANT IS IN NOVEMBER BEFORE THE FIRST SNOW. DO NOT SOW OVER HEAVY SNOWPACK. SEED WILL LAY DORMANT AND BE READY TO GERMINATE ONCE THE GROUND THAWS AND WARMS IN LATE WINTER. IF SEEDING IN LATE FALL IS NOT POSSIBLE, SEED BEFORE APRIL 1. CONTACT SUMMIT SEED. DARRELL@SUMMITSEEDING.COM 435-709-8003.
  - O **APPLICATION**: HYDROSEEDING SHALL CONSIST OF SEED, TACKIFIER, WOOD FIBER MULCH AND FERTILIZER IN A WATER BASED SLURRY. TANK MOUNTED TRUCK SHALL HAVE CONTINUOUS AGITATION. THE PUMP ON THE TRUCK WILL FORCE THE SLURRY THROUGH A TOP-MOUNTED DISCHARGE NOZZLE (TOWER). USE 2000 POUNDS WOOD FIBER MULCH AND 50-100 POUNDS OF TACKIFIER PER ACRE.
  - O **IRRIGATION**: ALL AREAS MUST BE KEPT MOIST WITHOUT PUDDLES OR RUNOFF USING FREQUENT DAYTIME WATER CYCLES. ADJUST AND MONITOR SPRINKLERS AND CLOCK TO ACHIEVE PROPER IRRIGATION.
- IF PERMANENT IRRIGATION IS NOT PLANNED, TEMPORARY IRRIGATION IS REQUIRED AT THE FOLLOWING SCHEDULE: FOR 8 WEEKS SOIL SHALL REMAIN DAMP DURING ESTABLISHMENT PERIOD WITHOUT PUDDLING ON SOIL SURFACE. APPLY WATER APPROXIMATELY THREE TIMES A DAY FOR 5-7 MINUTES FOR EACH IRRIGATION EVENT DEPENDING ON TEMPERATURE AND TIME OF YEAR. A SPARSE DENSITY IS EXPECTED. CONTINUE TEMPORARY IRRIGATION FOR ONE YEAR EVENTUALLY REDUCING WATER APPLICATION TO ONCE A WEEK, THEN ONCE EVERY TWO WEEKS TO FINALLY ONCE A MONTH. MONITOR PROGRESS OF ESTABLISHMENT AND ADJUST SPRINKLERS ACCORDINGLY. THE GOAL IS TO CREATE A HEALTHY STAND OF GRASSES WITH LITTLE TO NO IRRIGATION.
  - O **WEED CONTROL AND MAINTENANCE:** MANDATORY WEED CONTROL IS REQUIRED TO REDUCE COMPETITION AND WEED SEED PRODUCTION. WEEDS MUST BE KEPT UNDER CONTROL BY MECHANICALLY PULLING OR CHEMICALLY SPRAYING AS DIRECTED BY THE APPLICATOR. APPLY A BROADLEAF HERBICIDE BIANNUALLY AND ESTABLISH A CONSISTENT REGIMEN OF MOWING AND FERTILIZING TO PREVENT WEEDS FROM PRODUCING SEED. MOW ONCE IN THE SPRING AND ONCE IN THE FALL BEFORE FERTILIZATION. FERTILIZER OPTION IS SUSTAIN 4-6-4 DEPENDING ON SOIL FERTILITY. DO NOT MOW SHORTER THAN 4 INCHES. BAG ALL CUTTINGS TO REMOVE WEED SEED FROM PROPERTY. KEEP WEEDS CUT DOWN AND DO NOT LET THEM GO TO SEED. WEED SEED PRODUCTION IS THE GAUGE FOR WHEN TO MOW, WHICH GENERALLY OCCURS IN APRIL OR MAY AS WELL AS EARLY FALL DEPENDING ON TEMPERATURE AND MOISTURE. THIS PROCEDURE WILL BE REQUIRED UNTIL A HEALTHY STAND OF GRASSES IS EVIDENT AND COMPETING WELL WITH WEEDS. EXPECT FROM 1 TO 3 YEARS.
  - O **PROGANICS BIOTIC SOIL MEDIA**: WHERE CONDITIONS MAY PROHIBIT ADDING TOPSOIL, PROGANICS BIOTIC SOIL MEDIA SHOULD BE APPLIED BY HYDROSEEDER AT 3500LBS/ACRE WITH SEED AND FERTILIZER PRIOR TO THE APPLICATION OF WOOD MULCH(2000LBS/ACRE) COMBINED WITH TACKIFIER (50-100 LBS/ACRE)
  - O **ADDING FORBS**: SHRUBS AND PERENNIALS, BY SEED OR CONTAINER, CAN BE ADDED ONCE WEEDS ARE UNDER CONTROL AND HERBICIDE IS NO LONGER NEEDED. USUALLY 1-2 YEARS AFTER HYDROSEEDING.

MULCH

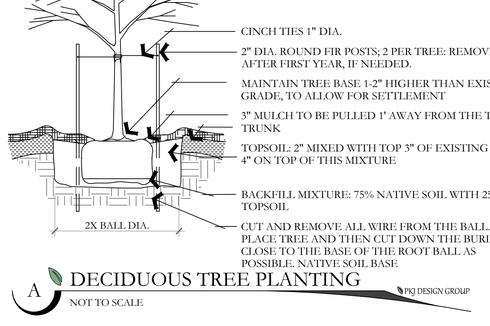
- ORGANIC
  - O PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 3" DEPTH OF ORGANIC MULCH TOP DRESSING. KEEP MULCH AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL
  - O IF REQUIRED BY CITY, INSTALL DEWITT SOZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL MULCH AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER.
  - O ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL /ORGANIC MULCH(, NO MULCH SHALL BE PLACED WITHIN 12" OF TREE TRUNK AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
- INORGANIC
  - O ROCK MULCH PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. WHERE PLANTING IS SPARSE (GREATER THAN 4' DISTANCE BETWEEN PLANTS OR 20' BETWEEN GROUPINGS), ADDITIONAL TOPSOIL IS NOT NECESSARY EXCEPT FOR BACKFILLING PLANTING HOLE. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT, BACKFILL WITH A 4:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. KEEP ROCK 12" AWAY FROM TRUNK OF TREES AND 6" AWAY FROM BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
  - O IF REQUIRED BY CITY, INSTALL DEWITT SOZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL ROCK AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE.

GENERAL IRRIGATION NOTES

- A NEW UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED BY CONTRACTOR IN ALL LANDSCAPED AREAS. LAWN AREAS TO RECEIVE AT LEAST 100% HEAD TO HEAD COVERAGE AND PLANTER AREAS TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB. POINT SOURCE DRIP OR IN-LINE DRIP TUBING TO BE SECURED AT CENTER OF ROOT BALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.

INSTALLER RESPONSIBILITIES AND LIABILITIES

- THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. LANDSCAPE CONTRACTOR IS REQUIRED TO USE TRADE KNOWLEDGE FOR IMPLEMENTATION. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS, MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.



A DECIDUOUS TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

6/18/2024 — UT24082

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

HOLLADAY PROJECT
1981 E. MURRAY HOLLADAY RD.
HOLLADAY, UTAH

RODERICK ENTERPRISES
ATT: BENJAMIN WHATON
801-506-5005
BENW@RODERICKREALTY.COM

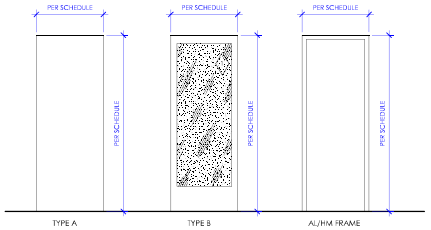
PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

LICENSED LANDSCAPE ARCHITECT — JEREMY AINSWORTH — 812817-5301 — EXPIRES 6/18/2024 — STATE OF UTAH

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 6/18/2024

LANDSCAPE PLAN
CITY PERMIT SET

LP-100



A6 - DOOR ELEVATIONS

1/2" = 1'-0"

GLAZING LEGEND

1 — 4" CLEAR TEMPERED GLASS

2 — 1/4" CLEAR GLAZING

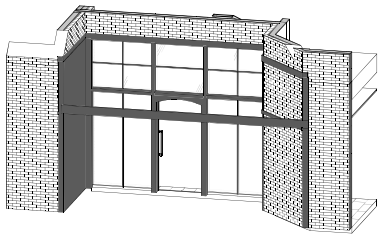
GLAZING NOTES:
HOLLOW METAL FRAMES TO MATCH DOOR SPEC.
(DOOR/WINDOW TRIM PAINT: SHERWIN WILLIAMS - "CAVIART- 6990 - TENANT REVIEW AND APPROVAL REQUIRED FOR THIS SUBMITTAL

TEMPERED GLAZING NOTES:

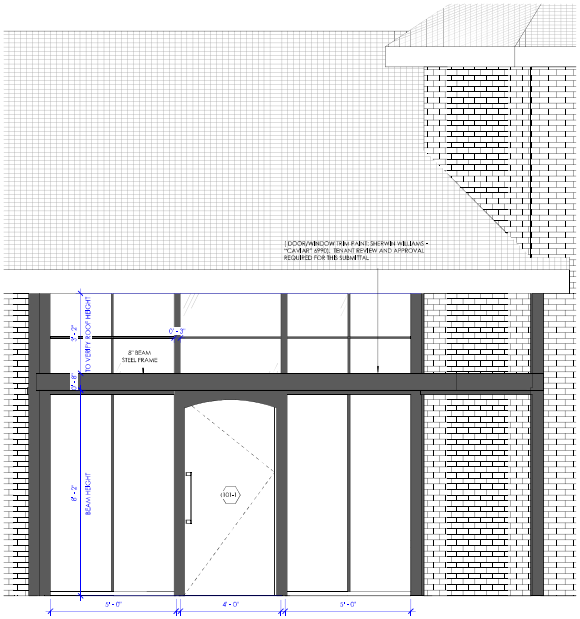
HUMAN IMPACT LOADS. INDIVIDUAL GLAZED AREAS, INCLUDING GLASS MIRRORS, IN HAZARDOUS LOCATIONS AS DEFINED BELOW SHALL COMPLY WITH SECTIONS 2406.1.1 THROUGH 2406.1.3 OF THE IBC [INTERNATIONAL BUILDING CODE].

IDENTIFICATION OF SAFETY GLAZING. EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A LABEL SPECIFYING THE LABELER, WHETHER THE MANUFACTURER OR INSTALLER, AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, AS WELL AS IDENTIFICATION SPECIFIED IN SECTION 2403.1 OF THE IBC [INTERNATIONAL BUILDING CODE]. THE LABEL SHALL BE ACID ETCHED, SAND BLASTED, CERAMIC FIRED OR AN EMBOSSED MARK, OR SHALL BE OF A TYPE THAT ONCE APPLIED CANNOT BE REMOVED WITHOUT BEING DESTROYED.
EXCEPTIONS:
1. FOR OTHER THAN TEMPERED GLASS, LABELS ARE NOT REQUIRED, PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE CONFIRMING COMPLIANCE WITH THIS CODE.
2. TEMPERED SPANDREL GLASS IS PERMITTED TO BE IDENTIFIED BY THE MANUFACTURER WITH A REMOVABLE PAPER LABEL.

HAZARDOUS LOCATIONS. THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS REQUIRING SAFETY GLAZING MATERIALS:
1. GLAZING IN SWINGING DOORS.
2. GLAZING IN FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SLIDING AND BIFOLD CLOSET DOOR ASSEMBLIES.
3. GLAZING IN STORM DOORS.
4. GLAZING IN UNFRAMED SWINGING DOORS.
5. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE A STANDING SURFACE.
6. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH (610 MM) ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE THE WALKING SURFACE.
EXCEPTIONS:
1. PANELS WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND GLAZING.
2. WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET (914 MM) OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION 2406.3, ITEM 7.
3. GLAZING IN WALLS PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION. OTHER THAN THE WALL TOWARDS WHICH THE DOOR SWINGS WHEN OPENED, IN CONS- AND TWO- FAMILY DWELLINGS OR WITHIN DWELLING UNITS IN GROUP R-2
7. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL, OTHER THAN IN THOSE LOCATIONS DESCRIBED IN PRECEDING ITEMS 5 AND 6, WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:
7.1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET (0.84 M2);
7.2. EXPOSED BOTTOM EDGE LESS THAN 18 INCHES (457 MM) ABOVE THE FLOOR;
7.3. EXPOSED TOP EDGE GREATER THAN 36 INCHES (914 MM) ABOVE THE FLOOR; AND
7.4. ONE OR MORE WALKING SURFACE(S) WITHIN 36 INCHES (914 MM) HORIZONTALLY OF THE PLANE OF THE GLAZING.
EXCEPTION: SAFETY GLAZING FOR ITEM 7 IS NOT REQUIRED FOR THE FOLLOWING INSTALLATIONS:
1. A PROTECTIVE BAR 1-1/2 INCHES (38 MM) OR MORE IN HEIGHT, CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PLF (730 N/M) WITHOUT CONTACTING THE GLASS, IS INSTALLED ON THE ACCESSIBLE SIDES OF THE GLAZING 34 INCHES TO 38 INCHES (864 MM TO 965 MM) ABOVE THE FLOOR.
2. THE OUTBOARD PANE IN INSULATING GLASS UNITS OR MULTIPLE GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLASS IS 25 FEET (7620 MM) OR MORE ABOVE ANY GRADE, ROOF, WALKING SURFACE OR OTHER HORIZONTAL OR SLOPED (WITHIN 45 DEGREES OF HORIZONTAL) (0.78 RAD) SURFACE ADJACENT TO THE GLASS EXTERIOR.
8. GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE. MUST ALSO BE LAMINATED PER IBC 2407.
9. GLAZING IN WALLS AND ENCLOSURES FOR INDOOR AND OUTDOOR SWIMMING POOLS, HOT TUBS AND SPAS WHERE ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:
9.1. THE BOTTOM EDGE OF THE GLAZING ON THE POOL OR SPA SIDE IS LESS THAN 60 INCHES (1524 MM) ABOVE A WALKING SURFACE ON THE POOL OR SPA SIDE OF THE GLAZING; AND
9.2. THE GLAZING IS WITHIN 60 INCHES (1524 MM) HORIZONTALLY OF THE WATER'S EDGE OF A SWIMMING POOL OR SPA.
10. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36 INCHES (914 MM) HORIZONTALLY OF A WALKING SURFACE WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60 INCHES (1524 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE. • MUST ALSO BE LAMINATED PER IBC 2407.
11. GLAZING ADJACENT TO STAIRWAYS WITHIN 60 INCHES (1524 MM) HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60 INCHES (1524 MM) ABOVE THE NOSE OF THE TREAD - MUST ALSO BE LAMINATED PER IBC 2407.
EXCEPTION: SAFETY GLAZING FOR ITEM 10 OR 11 IS NOT REQUIRED FOR THE FOLLOWING INSTALLATIONS WHERE:
1. THE SIDE OF A STAIRWAY, LANDING OR RAMP WHICH HAS A GUARDRAIL OR HANDRAIL, INCLUDING BALUSTERS OR IN-FILL PANELS, COMPLYING WITH THE PROVISIONS OF SECTIONS 1012 AND 1607.7, AND
2. THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES (457 MM) FROM THE RAILING.

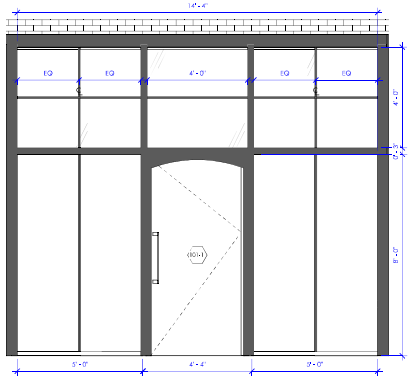


2 A601 **View - Storefront Entrance**



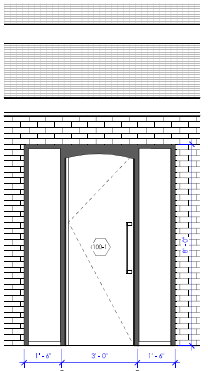
1 A601 **Elevation 14 - Storefront Entrance**

1/2" = 1'-0"



3 A601 **Elevation 14 - Storefront Entrance 1**

1/2" = 1'-0"



4 A601 **Elevation - Storefront Entrance 2**

1/2" = 1'-0"

DOOR PANEL NOTES:

WOOD DOORS: SOLID CORE OAK WOOD DOORS - STAIN: MINWAX ESPRESSO 273. DOOR/WINDOW TRIM PAINT: SHERWIN WILLIAMS - "CAVIAR" 6990 - TENANT REVIEW AND APPROVAL REQUIRED FOR THIS SUBMITTAL.
HOLLOW METAL INTERIOR: 18 GAUGE DOORS AND 16 GAUGE WELDED FRAMES. ALL PRIME PAINTED. - TENANT REVIEW AND APPROVAL REQUIRED FOR THIS SUBMITTAL.
ALL HOLLOW METAL FRAMES TO BE PAINTED "BLACK METAL" DURON 5784N, SEMI GLOSS. - TENANT REVIEW AND APPROVAL REQUIRED FOR THIS SUBMITTAL.

DOOR HARDWARE NOTES:

HINGES: BALL BEARING HINGES THROUGHOUT, STAINLESS STEEL AT EXTERIOR.
LOCKS: GRADE 1, SERIES 4000 SCHLAGE ND SERIES OR ALL LOCKS TO BE MASTERKEYED, GRAND MASTER KEYED PER OWNERS REQUIREMENTS. ALL LOCKS NEED TO BE "PUSH".
CLOSERS: GRADE 1 EQUAL TO LCN 4000 SERIES OR STANLEY EQUAL.
THRESHOLDS, DRIP CAPS, SWEEPS AND WEATHER STRIP: PEMKO OR NATIONAL GUARD.
DOOR STOPS: EACH DOOR WITH A CLOSER NEEDS A HEAVY DUTY DOOR STOP OVERHEAD.
EGRESS DOORS: EACH EGRESS DOOR EXCEPT THE MAIN EXTERIOR FRONT ENTRANCE NEEDS TO HAVE A PANIC PUSH BAR.

NOTES: ALL HARDWARE IS TO BE BRUSHED CHROME. - TENANT REVIEW AND APPROVAL REQUIRED FOR THIS SUBMITTAL

GENERAL NOTES:

1. ALL DOOR HARDWARE TO BE LEVEL TYP MECHANISMS.
2. RHE DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
3. MASTER KEY ALL LOCKSETS WITH C-CORES.
4. MANUAL FLUSH BOLTS FOR THE DOUBLE DOORS ARE ONLY ALLOWED IN THE INACTIVE DOOR ACCESSING MECHANICAL AND STORAGE ROOMS.
5. PROVIDE DOOR STOPS OR BUMPERS AT ALL DOOR LOCATIONS WHERE DOOR COMES IN CONTACT WITH ADJACENT WALL, COORDINATE TYPE AND PLACEMENT WITH OWNER.
6. ALL ALUMINUM FRAMES TO BE KAWNEER INTAL FRAMES OR EQUAL.
7. ALL KNOCK-DOWN & WELD FRAMES TO BE PAINT GRADE.
8. ALL FIRE RATED DOORS AND ASSEMBLIES SHALL BE LABELED BY AN APPROVED TESTING LABRATORY INDICATING THE RATING OF THE DOOR.

FOOTNOTES:

A. PROVIDE MANUAL FLUSH BOLTS FOR INACTIVE LEAF, LEVER AND CLOSER ON ACTIVE LEAF.
B. TENANT REVIEW AND APPROVAL REQUIRED FOR THE SUBMITTAL
C. LATCH TO HAVE OCCUPIED/UNOCCUPIED INDICATOR, PRIVACY FUNCTION

KEYING TYPE

PVCY	=	PRIVACY LOCKS
KD	=	KEYED LOCK
SB	=	SALMIN BOLT
CR	=	CARD READER
MG	=	MAGNETIC LOCK
RS	=	ELECTRIC STRIKE
KOTB	=	KEY OUTSIDE, THUMB TURN INSIDE
TRMK	=	DEADBOLTS, MARKED LOCKSOUN, LOCKED
LO	=	LOCK SET KEYED OUTSIDE
DSK	=	DEADBOLT KEYED BOTH SIDES
KOPB	=	KEY OUTSIDE, PANIC PUSH BAR INSIDE

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RODERICK HQ - HOLLADAY OFFICE

RODERICK

1981 EAST MURRAY HOLLADAY ROAD, SALT LAKE CITY, UTAH 84117

Revision Schedule

MARK	DESCRIPTION	Revision Date

AE2024.020

DOOR SCHEDULES

DATE: May 14, 2024

SHEET #:

A601

PROJECT STATUS

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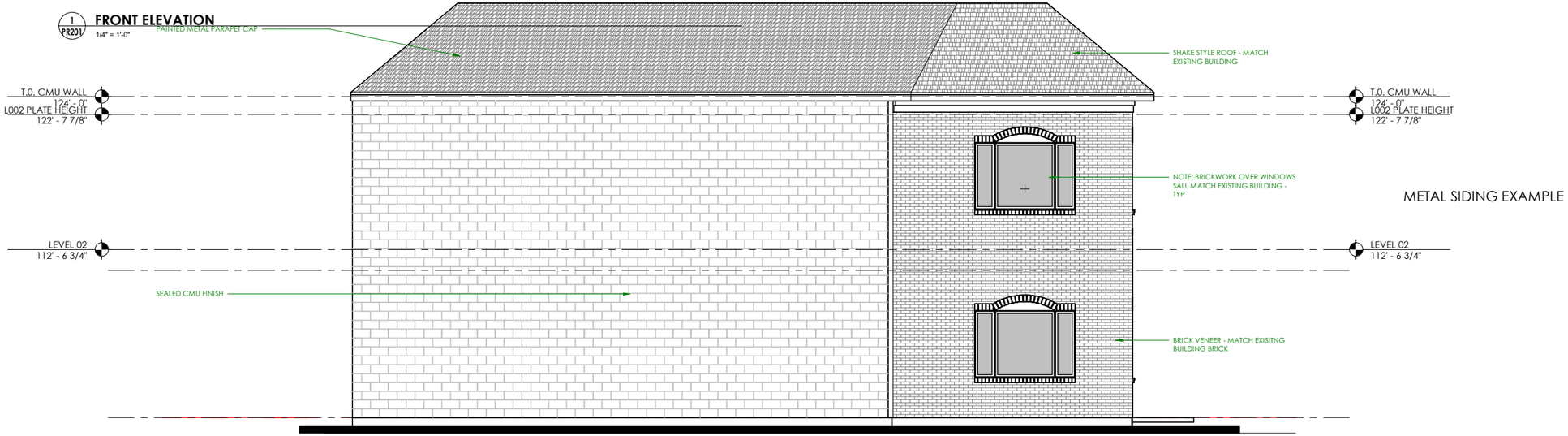
FIBER CEMENT SIDING EXAMPLE

1 PR201 **FRONT ELEVATION**
1/4" = 1'-0"



METAL SIDING EXAMPLE

2 PR201 **LEFT ELEVATION**
1/4" = 1'-0"

G:\Shared drives\AE2024\AE2024.094 - BEN WHEAT - Corporate Office New Garage\AE2024.094 - RODERICK OFFICE NEW GARAGE OPT PLANS2.rvt

RODERICK OFFICE GARAGE

Presentation Elevations

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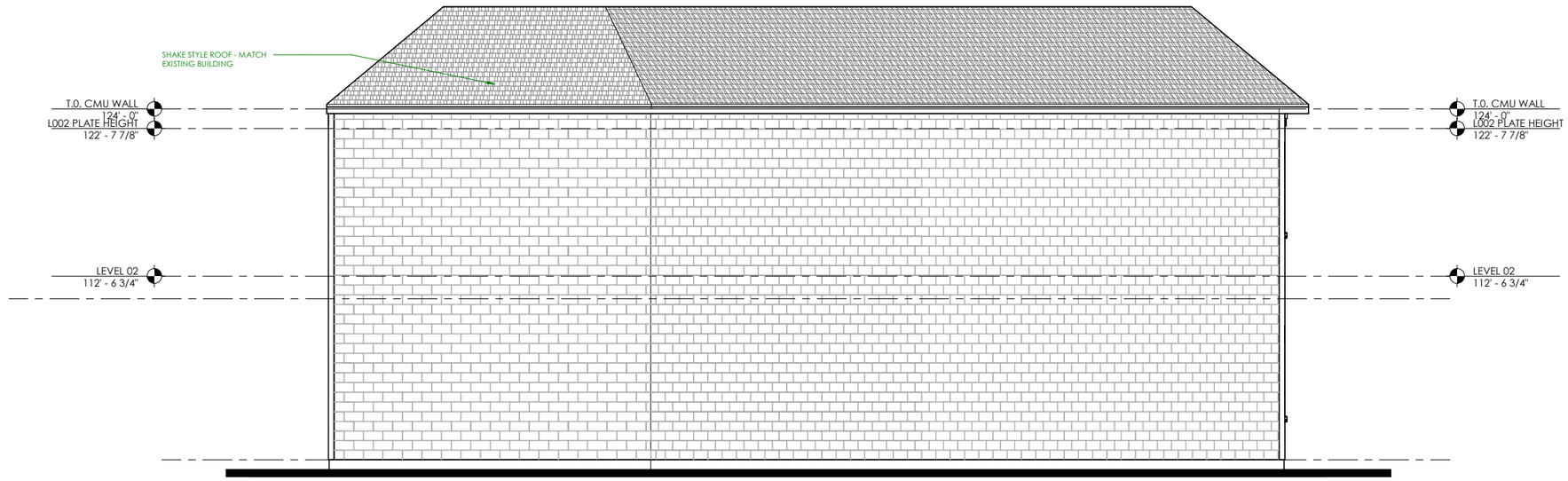
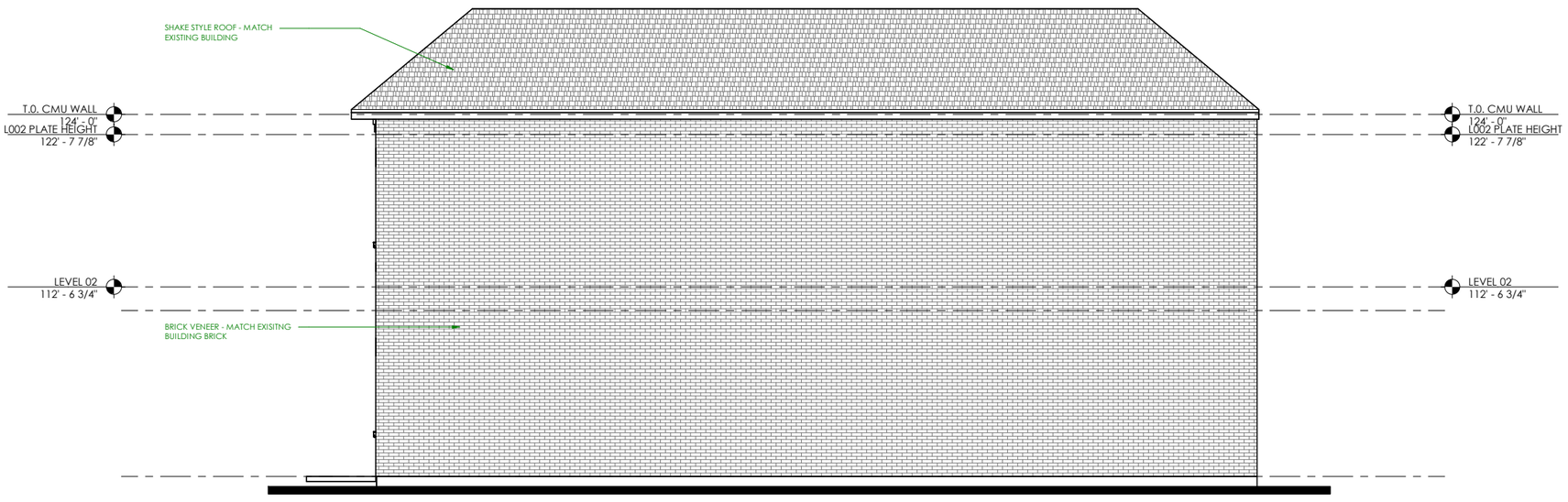
ae urbia ARCHITECTS & ENGINEERS



1 PR202 **REAR ELEVATION**

1/4" = 1'-0"



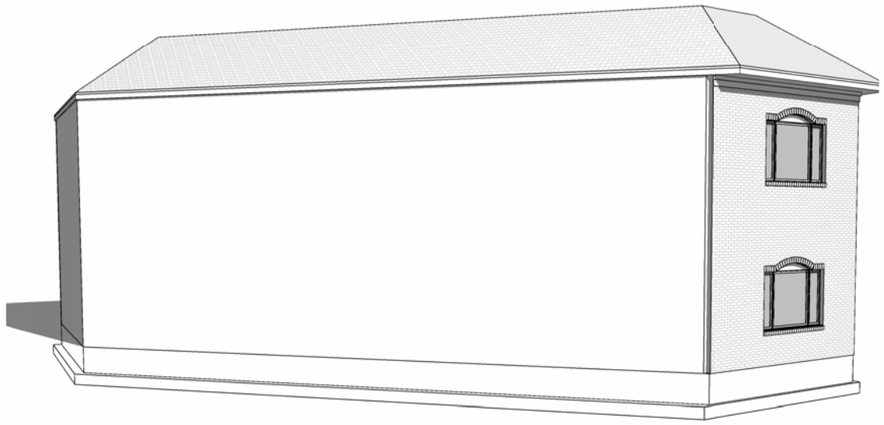
2 PR202 **RIGHT ELEVATION**

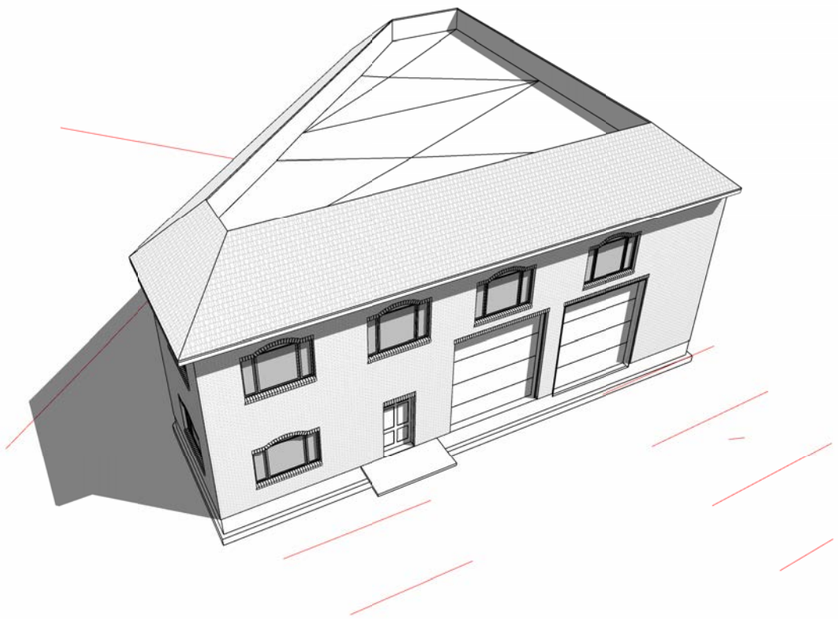
1/4" = 1'-0"

RODERICK OFFICE GARAGE

Presentation Elevations

ae urbia ARCHITECTS & ENGINEERS





City of Holladay

TRAINING

PLANNED UNIT DEVELOPMENTS AND
ROYAL HOLLADAY HILLS SITE DEVELOPMENT MASTER PLAN (SDMP)

PLANNED UNIT DEVELOPMENTS

Planned Unit Developments are a Conditional Use

"A conditional use is a land use that has unique characteristics or negative effects that may not be compatible in an area without conditions to mitigate or eliminate the detrimental impacts." *(source: Utah Property Rights Ombudsman)*

What are Applicable Standards?

Standards guide decisions on the nature and extent of the conditions. They are guidelines in an ordinance that help determine the type and extent of conditions that may be imposed.

What are Detrimental Impacts?

Detrimental impacts are the problem. The detrimental effects identified for a conditional use should be related to negative impacts on legitimate governmental interests, or on the public welfare.

How are Conditions Determined?

Conditions are the means to solve the problem. Conditions must be reasonable, address the identified effects, and must refer to the applicable standards already identified in the land use ordinance.

Planned Unit Developments PURPOSE

- Permit flexibility in land use
- Allow diversification in the interrelationships of various uses and structures with their sites and thus offer an alternative to conventional development
- Encourage:
  - Unique neighborhoods
  - High quality housing
  - Exceptional design
  - Additional open space
  - Facilities compatible with the present living environment in the City

Additional points:

- The objective is to preserve existing greenery and significant trees on the site.
- The PUD must create unique benefits for both the property owner and the city
- Applicants must justify why the project would be better for the community than a project developed as the underlying zoning would normally allow.

Planned Unit Developments OBJECTIVES

1. The stabilization and preservation of the existing or planned land uses in abutting areas and surrounding residential neighborhoods;
2. Preservation and enhancement of desirable site characteristics such as natural topography, vegetation and geologic features, and the prevention of soil erosion;
3. Preservation of buildings which are architecturally or historically significant or contribute to the character of the city;
4. Maximizing and preserving vegetation and open space and/or other special development amenities to provide light, air and privacy, to buffer abutting properties and to provide active and passive recreation opportunities for residents of the planned development and/or the community;
5. Minimize significant through traffic impacts on adjacent residential neighborhoods;
6. Provide an appropriate transition or buffering between uses of differing intensities both on site and off site; and
7. Provide safe and convenient vehicle and pedestrian connections between adjacent uses.

Planned Unit Developments PROCESS

Three step review of Site Plan – Concept, Preliminary, and Final

Submission Requirements

- Standard Subdivision design with maximum density calculation of zone
  - Minimum lot size, lot width, and setbacks
- PUD site plan showing, ***where pertinent***
  - Use, dimensions, elevations and locations of structures
  - Dimensions and locations of areas to be reserved and developed for vehicular and pedestrian circulation.
  - Architectural drawings outlining the general design and character of the proposed uses and the physical relationships of the uses
  - Residential density, coverage and open space characteristics to make a determination that the proposed arrangement of buildings/uses makes it desirable to apply regulations and requirements differing from those ordinarily applicable.
    - Explanation of how the proposed PUD satisfies the purposes
    - Phasing details, if applicable

Planned Unit Developments

What Can't Be Waived?

- Use Regulations
- Overall building height regulations, including graduated height
- Density

The PUD must also be compliant with Subdivision Regulations

Planned Unit Developments
Planning Commission Findings

The Planning Commission can approve, approve with conditions, or deny a PUD.
Must have written findings of fact according to the following standards:

- The PUD shall meet the purpose statement for a PUD
- Master Plan and Zoning compliance
- Compatible with the character of the site, adjacent properties, and existing development within the vicinity of the site. **Consider the following to determine compatibility:**
    1. Does the street/access provide necessary ingress/egress without materially degrading the service level on the street/access or adjacent street/access?
    2. Would the PUD and it's location create unusual pedestrian or vehicle traffic patterns or volumes that would not be expected, based on:
        a. Orientation of driveways
        b. Parking area locations/size
        c. Hours of peak traffic
    3. Internal circulation system designed to mitigate adverse impacts on adjacent land uses, public series, and utility resources
    4. Existing/proposed utility and public services are adequate to support the PUD and designed to avoid adverse impacts on adjacent land uses, public services, and utility resources.
    5. Buffering or other mitigation to protect adjacent land uses from excessive light, noise, odor, and visual impacts. Trash collection, deliveries, mech. equip.
    6. Does the mass and scale of the buildings, the intended use, and intensity/size/scale are compatible with surrounding properties.

Planned Unit Developments Minimum Area

PUDs require a minimum area by zone to qualify
Typically, 3 times the size of the minimum lot size

Zone Type	Designation	Minimum Area
Forestry and recreation zone	FR-0.5	1.5 acres
Forestry and recreation zone	FR-1	3 acres
Forestry and recreation zone	FR-2.5	7.5 acres
Forestry and recreation zone	FR-5	15 acres
Forestry and recreation zone	FR-10	30 acres
Forestry and recreation zone	FR-20	60 acres
Single-family residential zone	R-1-4	12,000 sq. ft.
Single-family residential zone	R-1-8	24,000 sq. ft.
Single-family residential zone	R-1-10	30,000 sq. ft.
Single-family residential zone	R-1-15	45,000 sq. ft.
Single-family residential zone	R-1-21	1.5 acres
Single-family residential zone	R-1-43	3 acres
Single-family residential zone	R-1-87	6 acres
Multi-family residential zone	R-2-8	24,000 sq. ft.
Multi-family residential zone	R-2-10	30,000 sq. ft.
Multi-family residential zone	R-M	12,000 sq. ft.
Commercial zone	C-1	No minimum
Commercial zone	C-2	No minimum

Planned Unit Developments
Effect on Adjacent Properties

The Code gives specific standards to assess the effect on adjacent properties
The Planning Commission can require arrangement of structures and open spaces within the site plan, as necessary, to assure that adjacent properties will not be adversely affected.

Height and Intensity

- Height and intensity of buildings and uses shall be arranged around the boundaries of the PUD to be compatible with existing adjacent developments or zones.
- Unless conditions of the site warrant, buildings located on the periphery shall be limited to a maximum height of two stories.
- Comply with graduated height restrictions of the underlying zone

Area, Width, Yard, and Coverage

- Lot area, lot width, yard, and coverage regulations shall be determined by approval of the site plan and shall meet the requirements of the underlying zone wherever possible.

Density

- Cannot exceed limitations of the zone. Density calculation can include open space. Roadways cannot be included in the PUD for the purpose of calculating density

Planned Unit Developments

Open Space, Landscaping, Fencing, Lighting

Open Space
To be preserved and maintained in perpetuity as open space

Landscaping, Fencing, and Screening
Anything related to the uses with the site and as a meaning of integrating the PUD into its surrounds should be planned and presented to the Commission with other required plans for the development

Signs and Lighting
Show size, location, design, and nature of any signs. Detail the intensity and direction of area lighting.

PUD details and specifications are recorded on the subdivision plat.

Modifications to PUDs, including landscaping, require review and approval from the Planning Commission

ROYAL HOLLADAY HILLS
SITE DEVELOPMENT MASTER PLAN (SDMP)

Royal Holladay Hills SDMP

Background and History

Considering the significant size and regional economic importance of the former Cottonwood Mall site, a site development master plan was created in 2007 to guide cohesive development of the overall site, which was broken down into development blocks.

Due to the recession from 2008 – 2012, development never occurred. The former SDMP was modified to include more in 2018 through a public process including public hearings. The modifications to primarily residential use was not an economically viable land use and the 2018 SDMP was rescinded, retuning the 2007 SDMP as the regulating document for the site.

Royal Holladay Hills SDMP

Overview of Document

General Development Guidelines are found on the cover page

- Site acreage
- Building heights
- Parking (full site)
- Density (full site)
- Setbacks
- Open Space
- Total Square footage by use (commercial vs residential)

Parking, density, open space, and uses are regulated by minimums and maximums instead of a set number.

The full document contains site specific details including phasing, land uses, building massing and heights, site parking, thoroughfares, traffic study and impacts, streetscape design examples, open spaces plan, building materials and design guidelines, lighting and signage plan, utility details, and civil details.

When new sections of development come before the Planning Commission for approval, it is to ensure that the details of the new development are meeting the specific controlling regulations in the SDMP.

Cottonwood

Site Development Master Plan (SDMP)
Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

N
W E
S

Project Vicinity Boundary

Legal Description

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF MURRAY-HOLLADAY ROAD, SAID POINT BEING SOUTH 00º03'51" EAST ALONG THE SECTION LINE 658.03 FEET TO THE CENTER LINE OF SAID MURRAY-HOLLADAY ROAD AND NORTH 89º47'36" WEST ALONG SAID CENTER LINE 632.67 FEET AND SOUTH 54º39'59" EAST 83.42 FEET FROM THE NORTHEAST CORNER OF SECTION 9, TOWNSHIP 2 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, AND RUNNING THENCE EASTERLY ALONG SAID SOUTHERLY LINE THE FOLLOWING (2) COURSES: (1) NORTH 54º39'59" WEST 26.07 FEET, (2) SOUTH 89º47'36" EAST 127.55 FEET TO THE WESTERLY LINE OF THE UTAH POWER AND LIGHT PARCEL; THENCE ALONG SAID UTAH POWER AND LIGHT PARCEL THE FOLLOWING (4) COURSES: (1) SOUTH 21º59'01" WEST 42.15 FEET, (2) SOUTH 03º30'59" EAST 72.00 FEET, (3) SOUTH 06º38'59" EAST 127.12 FEET, (4) NORTH 78º59'01" EAST 179.90 FEET TO THE WESTERLY LINE OF THE SPRING FORTH INVESTMENTS PARCEL; THENCE ALONG SAID SPRING FORTH INVESTMENTS PARCEL THE FOLLOWING (2) COURSES: (1) SOUTH 02º59'59" EAST 8.99 FEET, (2) NORTH 78º59'01" EAST 167.85 FEET, MORE OR LESS, TO THE WESTERLY LINE OF MEMORY LANE; THENCE SOUTHERLY ALONG SAID WESTERLY LINE THE FOLLOWING (2) COURSES: (1) SOUTH 00º00'59" EAST 38.90 FEET, (2) SOUTH 44º45'59" EAST 929.25 FEET, MORE OR LESS, TO THE NORTHERLY LINE OF ARBOR LANE, AS PER DEDICATION PLAT RECORDED WITH THE OFFICE OF THE SALT LAKE COUNTY RECORDER IN BOOK N OF PLATS ON PAGE 1; THENCE ALONG SOUTHWESTERLY ALONG SAID NORTHERLY LINE THE FOLLOWING (10) COURSES: (1) SOUTH 46º48'01" WEST 200.20 FEET TO A POINT OF CURVATURE, (2) SOUTHWESTERLY ALONG THE ARC OF A 127.34 FOOT RADIUS CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 81º03'00" A DISTANCE OF 180.13 FEET (CHORD BEARS SOUTH 06º16'31" WEST 165.49 FEET), (3) SOUTH 34º14'59" EAST 64.50 FEET TO A POINT OF CURVATURE, (4) SOUTHEASTERLY ALONG THE ARC OF A 1121.28 FOOT RADIUS CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 18º38'00" A DISTANCE OF 364.65 FEET (CHORD BEARS SOUTH 24º55'59" EAST 363.05 FEET) TO A POINT OF COMPOUND CURVATURE, (5) SOUTHWESTERLY ALONG THE ARC OF 225.79 FOOT RADIUS CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 49º37'00" A DISTANCE OF 195.53 FEET (CHORD BEARS SOUTH 09º11'31" WEST 189.48 FEET) TO A POINT OF COMPOUND CURVATURE, (6) SOUTHWESTERLY ALONG THE ARC OF A 821.00 FOOT RADIUS CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 19º35'00" A DISTANCE OF 280.61 FEET (CHORD BEARS SOUTH 43º47'31" WEST 279.25 FEET), (7) SOUTH 36º24'59" EAST 8.50 FEET TO A POINT ON THE ARC OF A 214.51 FOOT NON-TANGENT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 36º24'59" WEST), (8) SOUTHWESTERLY ALONG THE ARC OF SAID 214.51 FOOT RADIUS CURVE THROUGH A CENTRAL ANGLE OF 41º24'00" A DISTANCE OF 155.00 FEET (CHORD BEARS SOUTH 74º17'01" WEST 151.65 FEET), (9) NORTH 85º00'59" WEST 351.80 FEET, (10) SOUTH 00º36'39" EAST 40.93 FEET TO A POINT ON THE WESTERLY LINE OF HIGHLAND DRIVE; THENCE NORTHWESTERLY ALONG SAID EASTERLY LINE THE FOLLOWING (8) COURSES: (1) NORTH 56º10'59" WEST 151.55 FEET, (2) NORTH 39º48'39" WEST 1124.58 FEET TO A POINT OF SPIRAL CURVATURE, (3) NORTHWESTERLY ALONG THE ARC OF SAID SPIRAL CURVE, SAID CURVE BEING CONCENTRIC WITH AND 50.00 FEET RADIALLY DISTANT EASTERLY FROM A 200.00 FOOT TEN-CHORD SPIRAL FOR A 4º CURVE TO THE RIGHT, 196.50 FEET, MORE OR LESS, TO A POINT OF CURVATURE OF A 1381.83 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 54º11'10" EAST), (4) NORTHWESTERLY ALONG THE ARC OF SAID 1381.83 FOOT RADIUS CURVE THROUGH A CENTRAL ANGLE OF 30º02'13" A DISTANCE OF 724.42 FEET (CHORD BEARS NORTH 20º47'43" WEST 716.15 FEET), MORE OR LESS, TO A POINT OF SPIRAL CURVATURE, (5) NORTHWESTERLY ALONG THE ARC OF SAID SPIRAL CURVE, SAID CURVE BEING CONCENTRIC WITH AND 50.00 FEET RADIALLY DISTANT EASTERLY FROM A 200.00 FOOT TEN-CHORD SPIRAL FOR A 4º CURVE TO THE RIGHT, 196.50 FEET, MORE OR LESS, TO A POINT OF TANGENCY, (6) NORTH 01º43'40" WEST 3.89 FEET, (7) SOUTH 88º12'51" WEST 10.00 FEET, (8) NORTH 01º43'40" WEST 43.18 FEET TO A POINT ON THE SOUTHERLY LINE OF SAID MURRAY-HOLLADAY ROAD; THENCE EASTERLY ALONG SAID SOUTHERLY LINE THE FOLLOWING (3) COURSES: (1) SOUTH 89º47'36" EAST 144.66 FEET, (2) SOUTH 00º11'01" WEST 15.00 FEET, (3) SOUTH 89º47'36" EAST 682.56 FEET TO THE POINT OF BEGINNING.

***Council Member Orton moved to adopt Resolution 07-51 and the site plan as presented with the date of December 11, 2007 with the inclusion of page 26 dated December 12, 2007 with the following addition: It is intended that height be the maximum as stated therein with the requirement that if additional height is requested by the developer that they must first appear before the Planning Commission and City Council for proper approvals. Council Member Peterson seconded the motion. Motion was unanimously approved by The City Council.

Owner/Developer Primary Contact

Kathy Olson
General Growth Properties, Inc.
35 Century Park Way
Salt Lake City, Utah 84115
(801) 486-3911

General Development Guidelines

Zoning: Regional Mixed-Use (R/M-U)
Total Site Acreage: 57.37 Acres
Building Height*:
- **Restricted:**
  - **Maximum: 40 Feet Height*****
  - **Maximum: 35 Feet Height for single family lots greater than .20 acres *****
  - **Minimum: No Dwellings shall contain less than one story**
- **Limited:**
  - **Maximum: 60 Feet Height (4 Stories)*****
  - **Minimum: No Dwellings shall contain less than one story**
- **Open:**
  - **Maximum: 90 Feet Height (5 Stories); including screening walls, architectural features and mechanical equipment.*** Not to exceed 80 Feet Height in 50% or less of Total Square Footage located in District Area Architectural Tower Feature not subject to height restrictions**
  - **Minimum: No Dwellings shall contain less than one story**

All Height Measurements are measured on New Proposed Grade Levels and shall be measured from the center point average of each building structure (see page 23 of the SDMP for proposed finished grade elevations)

Parking: Stalls (Min/Max) 2,643/4,421
Density:
- **Residential Units (Min/Max): 454 Units/614 Units**
- **Average DU/A (Min/Max): 7.91 Units per Acre/10.70 Units per Acre**

Setbacks:
- **45 Foot Average Setback from Big Cottonwood Creek to Building. Minimum of 40 Foot Setback along Big Cottonwood Creek to Building.**
- **Protected Zone: Minimum 10 Foot Setback from Right of Way along Memory Lane and Arbor Lane. Minimum 25 Foot Setback for 4 Single Family Lots over 0.20 Acres on Arbor Lane. 0 Foot Setback for Murray/Holladay Road and Highland Drive (excluding creek section) from Right of Way.**

Total Open Space (Min/Max):
- **479.232 square feet/648,372 square feet**
- **11.00 acres/14.88 acres**

Total Square Footage by Uses:**
- **Commercial (Min/Max): 579,169 square feet/772,225 square feet**
- **Residential (Min/Max): 762,141 square feet/ 1,031,131 square feet**

Developer is required to submit building permit approvals for the minimum required commercial square feet by block/subdivision (page 4) on or before the time of building permit approvals are granted for residential building uses by each block/subdivision.

Contents

Site Mixed-Use Allocations Summary by Total Square Footage

Total Site Square Feet (Vertical & Horizontal)

	Max SF	Min SF	Average %
Commercial Building	772,225	579,169	16%
Residential Building	1,031,131	762,141	21%
Landscaping & Open Space	648,372	479,232	13%
Impervious Structures (Parking Decks/Street)	3,013,173	1,386,398	49%
TOTAL Allocations	5,464,901	3,206,939	100%

Site Mixed-Use Allocations Summary by Site Acreage (Avg.)

Total Site Acreage: 57.37 Acres/2,499,057 Square Feet

	Average Footprint (Acres)	Average %
Commercial/Residential Footprint	24	42%
Landscaping & Open Space	13	23%
Impervious Structures Footprint (Parking Decks/Street)	20	35%
TOTAL Allocations	57.37 Acres	100%

Minimum and Maximum Allocations Represented in this Document are included for project use flexibility but are not used to be dictated as absolute amounts.

COTTONWOOD

PROJECT DESCRIPTION

HOLLADAY, UTAH

Situated on the eastern edge of the Salt Lake Valley, the Cottonwood site is largely defined by its proximity to two mountain ranges. The presence of Mt. Olympus and the Twin Peaks promontory to the east provides a constant reminder of the site's views and location.

Long before the Salt Lake City metropolitan area sprawled into Holladay, early settlement groups appreciated the Cottonwood area for its natural beauty. Solitary aesthetes communed with the nature through art; community groups gathered to share enjoyment of the setting; travelers stopped for respite and meals along the banks of the creek.

In the early twentieth century, Cottonwood's first buildings represented an investment in the area's long term engagement. Both household and community buildings displayed an appreciation of the climate, with porches and galleries extending living space into the outdoors. A large local farm even boasted a formal landscape of tree allies, implying that the settlement was designed for the enjoyment of future generations.

These inaugural settlers' responses to location, climate and geography remain valid today. The comfort and beauty of outdoor living still define the Cottonwood site, and will continue to play and important role in its planning and architecture. Likewise, historic models of building and infrastructure responding to the landscape can be found throughout the Salt Lake Valley.

The plan for the new Cottonwood looks to its history and geography to bring a new generation of residents and visitors to the site. A grid of streets and pedestrian blocks will replace the monolithic structure of the site's mall and its continuous pavement of parking lots, ultimately accommodating a mix of uses and housing types. The new Cottonwood will be a pedestrian-friendly, walk-able neighborhood which prioritizes the public civic realm. The majority of the site will be accessible to residents and visitors within a five minute walk from town center to town edge, enabling residents to easily access their daily needs on foot.

The heart of the Cottonwood community is the main street, which follows views of the peaks promontory as aligned from the entries off Highland Drive. All of Cottonwood's streets connect back to the main street, either as part of the vehicular network or through pedestrian passages that navigate the change in level with stairs and elevators. This vertical transition takes place and is marked by the campanile, a tower located as vista rumination not only for the main street but also for Highland Drive as it approaches Cottonwood from the South.

The Cottonwood center primarily features mixed-use buildings and live/work units, to provide the community with commercial vitality. The main street is bordered by continuous retail frontage with residential and office floors above extending from Macy's to the far side of the square. The community's western blocks are comprised of five-story mixed-use buildings facing the main street, with four stories of live-work and townhouses lining a three/four-level parking garage at the block interim. Additionally, three/four-story residential buildings face a paved river-walk and the creek.

The Macy's store serves as both a historical and contemporary functional anchor for the plan. A plaza in front of Macy's forms the north entry of the main street, with its axis aligned with the mountain peaks. The street's vista terminates on the square's campanile, bending to provide a view of the Twin Peak promontory.

The square will serve as a focal point and gathering place for the community, and is formed by this five-story mixed-use buildup. To the east is the cinema building, with restaurants on the ground floor, and two pedestrian passages connect the square to the townhouse mews to the east.

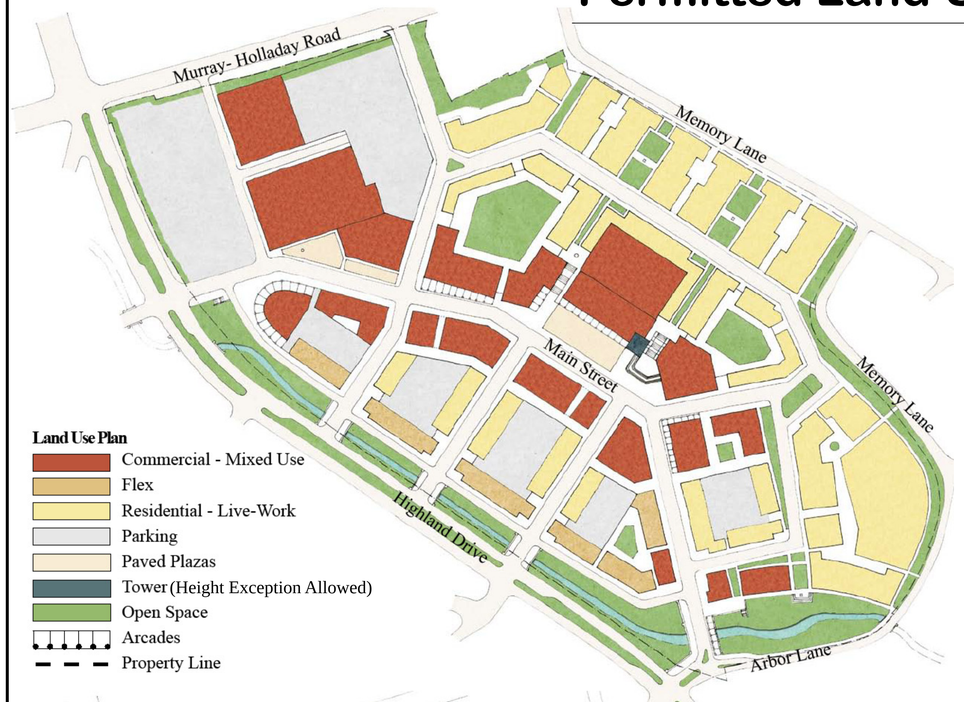
Opportunities to enjoy the site's landscape also exist throughout Cottonwood. The south entry of the main street crosses the creek and the park with a bridge that provides a picturesque pedestrian crossing. A restaurant is sited to view the creek, the park and the bridge. The creek is banked and landscaped to provide flood control and a continuous green space for Cottonwood. Additionally, the south entry of the main street creek park expands to allow the creek to be released from the paved channel of its mall days, providing a landscaped park to serve both Cottonwood and the adjacent neighborhood.

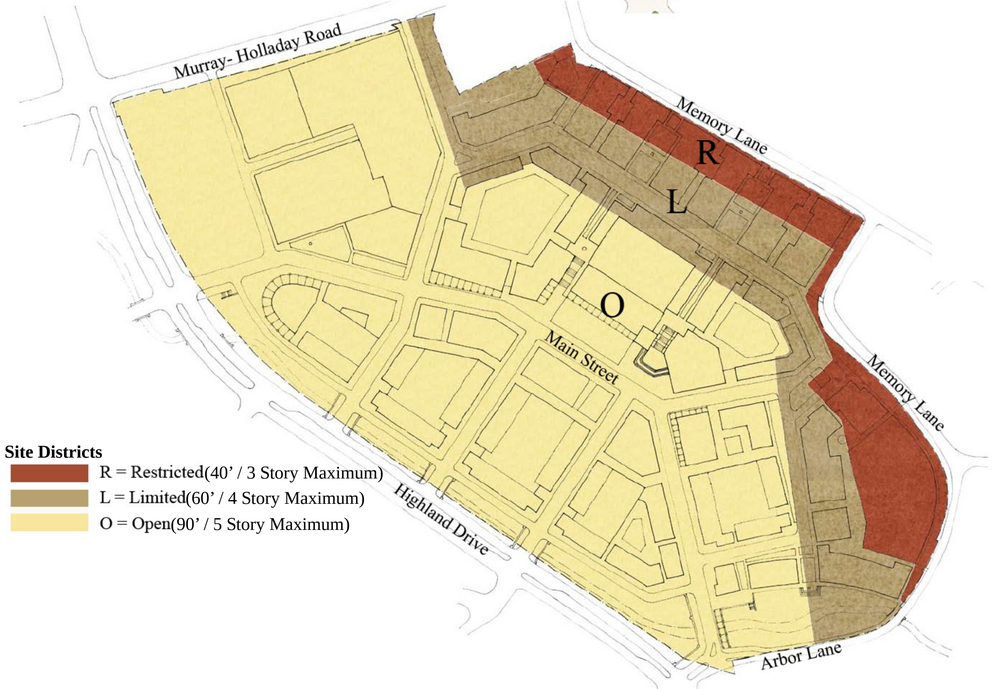
Cottonwood's traffic network neatly connects with the streets around it, and with the major streets framing the development. The main street connects to Highland Drive to the west through the creation of two short blocks aligned with the existing mall entries. To the south, the entrance to Cottonwood aligns with Highland Drive's southern approach.

East of the main street and the square, residential blocks of townhouses and cottages provide a transition to the surrounding residential neighborhoods. Along Memory Lane, several pedestrian-only entries facilitate neighborhood mobility. The entry to neighborhood is reformed to allow entry from Highland Drive while precluding traffic exiting from the main street.

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Permitted Land Uses by District and Building Functions





This table sets forth Land Use categories to delegate specific Functions and uses within established Districts

	RESTRICTED	LIMITED	OPEN
RESIDENTIAL			
Attached Housing		■	■
Detached housing	■	■	■
Ancillary Units (only permitted on lots greater than 0.20 acres	■		
LODGING			
Hotel (no room limit)			■
Inn (up to 12 rooms)			■
Bed and Breakfast (up to 5 rooms)		■	■
School Dormitory			■
COMMERCIAL			
Office		■	■
Live-Work Unit		■	■
Open-Market Building			■
Retail Building			■
Department Store Building			■
Display Gallery			■
Push Cart (mobile)			■
Restaurant			■
Kiosk (fixed)			■
Liquor Selling Establishment			*****
CIVIC			
Bus Shelter	■	■	■
Assembly Spaces			■
Fountain or Public Art	■	■	■
Library		■	■
Live Theater			■
Movie Theater			■
Museum			■
Outdoor Auditorium			■
Parking Structure			■
Playground	■	■	■
Surface Parking Lot		■	■
Religious Assembly			■
CIVIL SUPPORT			
Police Station			■
Funeral Home			■
Hospital			■
Medical Clinic			■
Postal Office			■
EDUCATION			
College			■
Trade School			■
Elementary School			■
Childcare Center			■

■ Permitted by Right

***** Permitted subject to compliance with applicable State of Utah regulation

Note: Live/Work Units are not regulated as home occupational units.

BUILDING FUNCTIONS

	RESTRICTED	LIMITED	OPEN
RESIDENTIAL	**Restricted Residential:** The number of dwellings on each Lot is restricted to one within a principal building and one within an Accessory Building, with 2.0 parking places for each. Both dwellings shall be under single ownership. The habitable area of the accessory dwelling shall not exceed 1,000 square feet. Accessory buildings are only permitted on lots greater than 0.20 acres.	**Limited Residential:** The number of dwellings on each Lot is limited by the requirement of 2.0 parking places for each dwelling, a ratio which may be reduced according to the shared parking standards.	**Open Residential:** The number of dwellings on each Lot is limited by the requirement of 1.0 parking places for each dwelling, a ratio which may be reduced according to the shared parking standards.
LODGING		**Limited Lodging:** The number of bedrooms available on each Lot for lodging is limited by the requirement of 1.0 assigned parking place for each bedroom, up to twelve, in addition to the parking requirement for dwelling. The lodging must be owner occupied. Food service may be provided in the a.m. The maximum length of stay shall not exceed ten days.	**Open Lodging:** The number of bedrooms available on each Lot for lodging is limited by the requirement of 1.0 assigned parking places for each bedroom. Food service may be provided at all times.
OFFICE		**Limited Office:** The building area available for office use on each Lot is limited to the first Story of the principal building and/or to the Accessory building, and by the requirement of 3.0 assigned parking places per 1000 square feet of net office space in addition to the parking requirement for each dwelling.	**Open Office:** The building area available for Office use on each Lot is limited by the requirement of 2.0 assigned parking places per 1000 square feet of net office space.
RETAIL			**Open Retail:** The building area available for Retail use is limited by the requirement of 3.0 assigned parking places per 1000 square feet of net Retail space.

DISTRICT	Open	Limited	Restricted	TOTAL
Area (SF)	1,797,013.00	445,023.87	257,020.98	2,499,057.85
Acres	41.25	10.22	5.90	57.37
Maximum Density (DU/A)	12	9	5	10.70

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Conceptual Phasing/Subdivision Plan

Total Land Area by Block

Block	A	B	C	D	E	F	G	H	I	J	K	L	Total SF
Area (SF)	144,635	362,779	153,475	158,780	170,583	201,485	241,009	148,380	162,394	195,374	311,066	249,097	2,499,057
Area (Acres)	3	8	4	4	4	5	6	3	4	4	7	6	57.37

Commercial Use by Block

Block	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL	
Total Commercial	-	**370,672**	32,647	28,204	25,303	28,854	20,874	65,814	91,171	108,686	-	-	772,225	Maximum
	-	**278,004**	24,485	21,153	18,977	21,641	15,656	49,361	68,378	81,515	-	-	579,169	Minimum

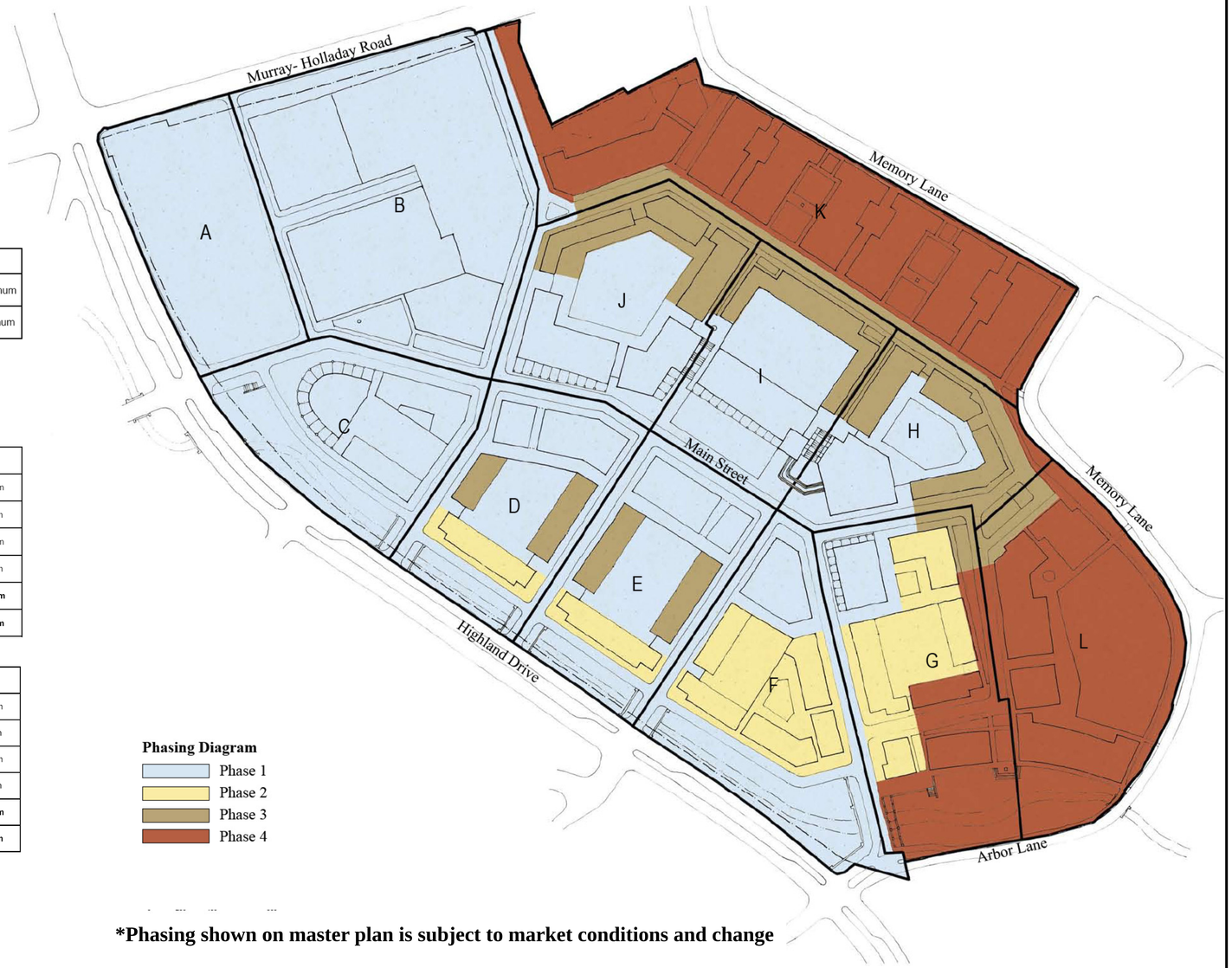
Residential Uses by Block

Residential Units

Blocks	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL	
Multi Family (Attached)	-	-	105	114	84	76	77	26	21	23	37	21	583	Maximum
	-	-	77	84	62	56	57	20	15	17	27	15	431	Minimum
Single Family (Detached)	-	-	-	-	-	-	-	-	-	-	23	8	31	Maximum
	-	-	-	-	-	-	-	-	-	-	17	6	23	Minimum
Total	**-**	**-**	**105**	**114**	**84**	**76**	**77**	**26**	**21**	**23**	**60**	**29**	**614**	**Maximum**
	-	**-**	**77**	**84**	**62**	**56**	**57**	**20**	**15**	**17**	**44**	**21**	**454**	**Minimum**

Residential Square Footage

Blocks	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL	
Multi Family (Attached)	-	-	175,717	191,165	140,960	127,443	129,374	44,412	34,757	38,619	61,791	34,757	978,996	Maximum
	-	-	129,878	141,296	104,188	94,197	95,624	32,826	25,690	28,545	45,671	25,690	723,605	Minimum
Single Family (Detached)	-	-	-	-	-	-	-	-	-	-	38,619	13,517	52,136	Maximum
	-	-	-	-	-	-	-	-	-	-	28,545	9,991	38,535	Minimum
Total	**-**	**-**	**175,717**	**191,165**	**140,960**	**127,443**	**129,374**	**44,412**	**34,757**	**38,619**	**100,410**	**48,274**	**1,031,131**	**Maximum**
	-	**-**	**129,878**	**141,296**	**104,188**	**94,197**	**95,624**	**32,826**	**25,690**	**28,545**	**74,216**	**35,681**	**762,141**	**Minimum**



***Phasing shown on master plan is subject to market conditions and change**

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TORTI GALLAS AND PARTNERS

McNEIL Engineering, Inc.

SB ARCHITECTS

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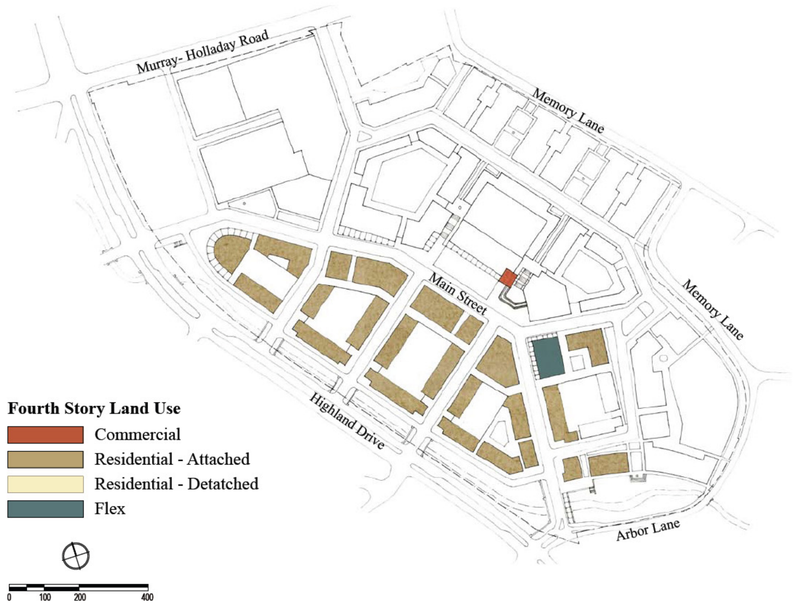
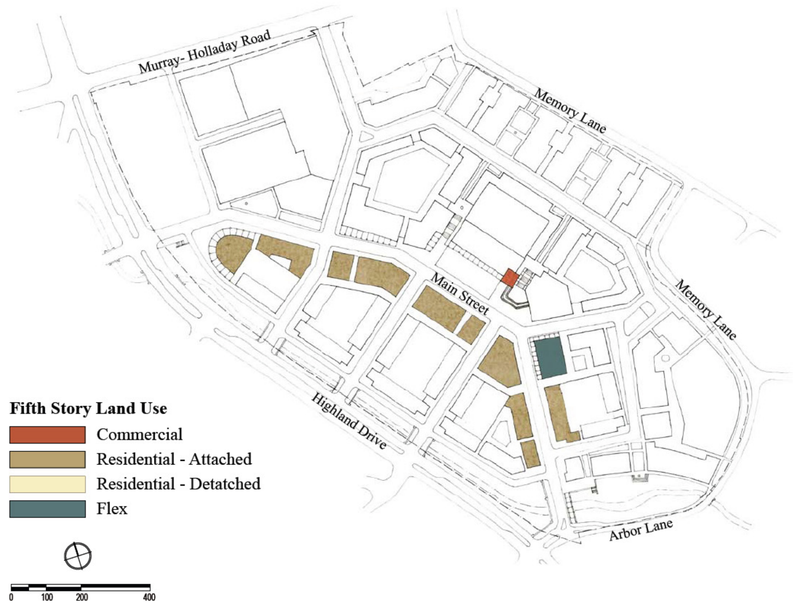
Land Use Regulating Plan - Uses by Story





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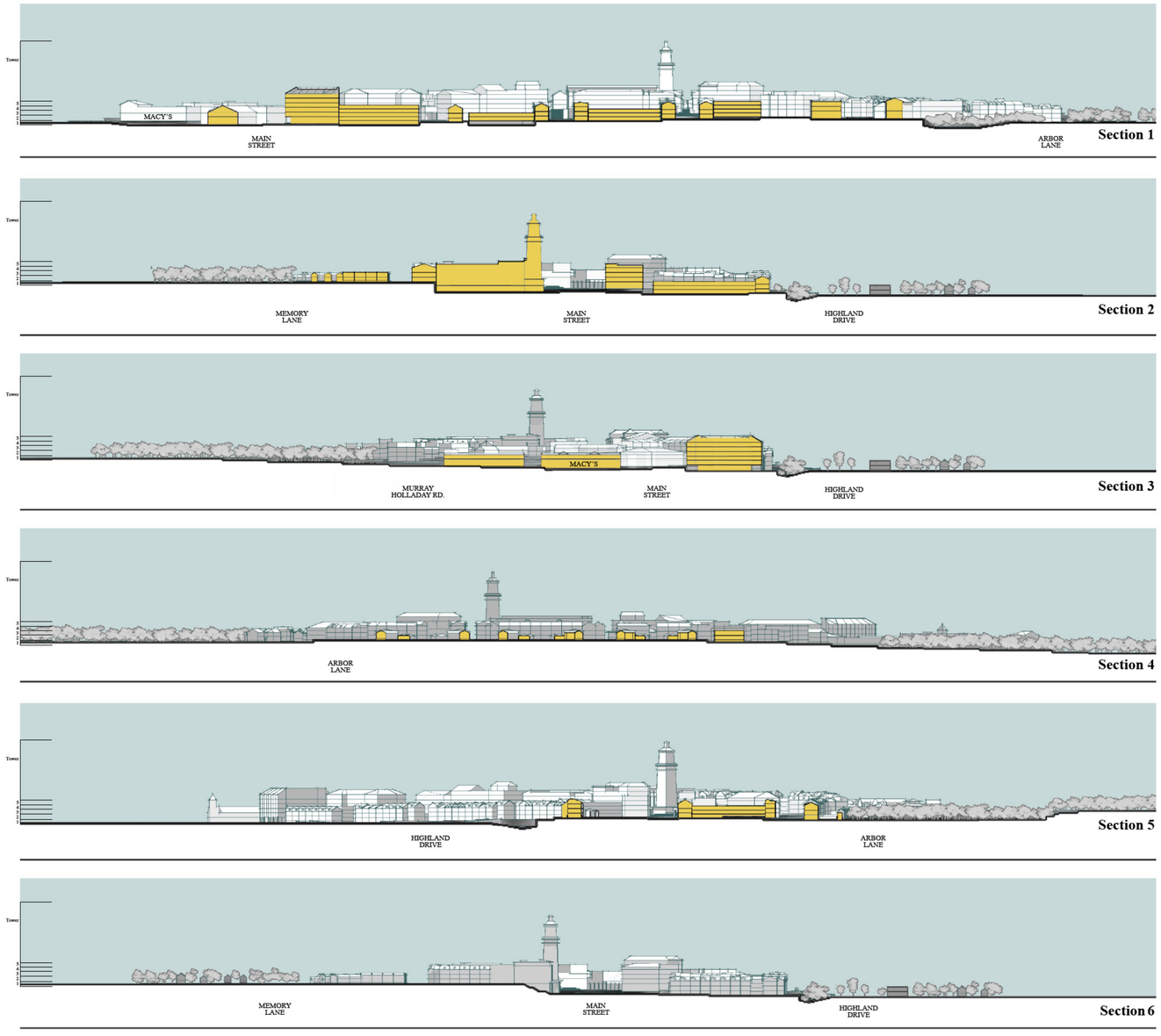
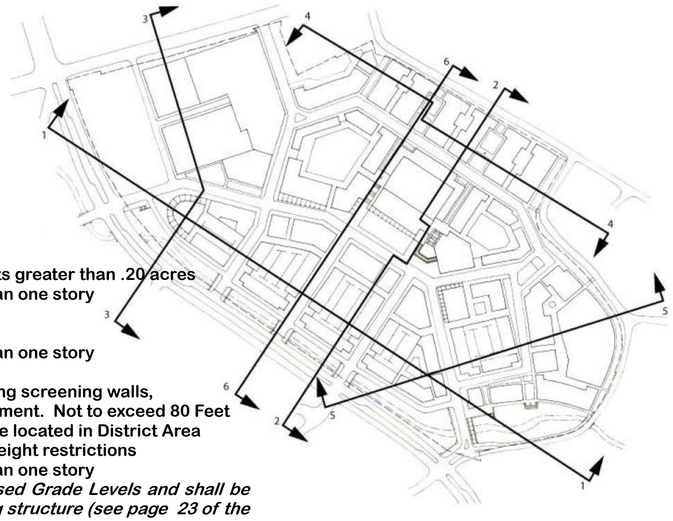
Building Massing and Heights Plan





General Height Guidelines

Building Height*:

Restricted:
- Maximum: 40 Feet Height
- Maximum: 35 Feet Height for single family lots greater than .20 acres
- Minimum: No Dwellings shall contain less than one story

Limited:
- Maximum: 60 Feet Height (4 Stories)
- Minimum: No Dwellings shall contain less than one story

Open:
- Maximum: 90 Feet Height (5 Stories); including screening walls, architectural features and mechanical equipment. Not to exceed 80 Feet Height in 50% or less of Total Square Footage located in District Area
- Architectural Tower Feature not subject to height restrictions
- Minimum: No Dwellings shall contain less than one story

All Height Measurements are measured on New Proposed Grade Levels and shall be measured from the center point average of each building structure (see page 23 of the SDMP for proposed finished grade elevations)

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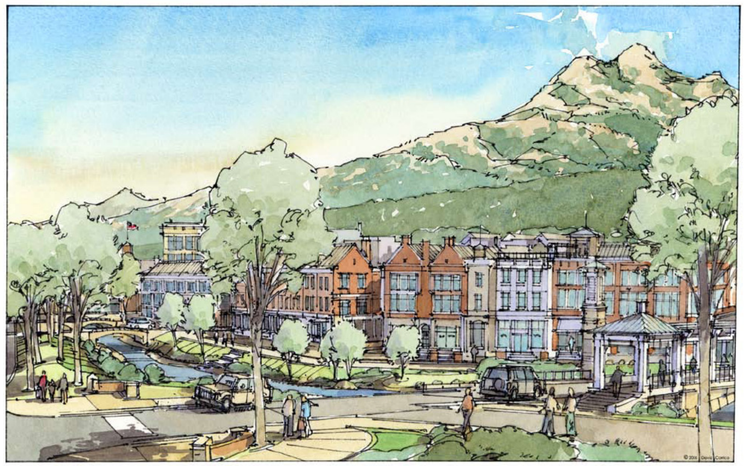
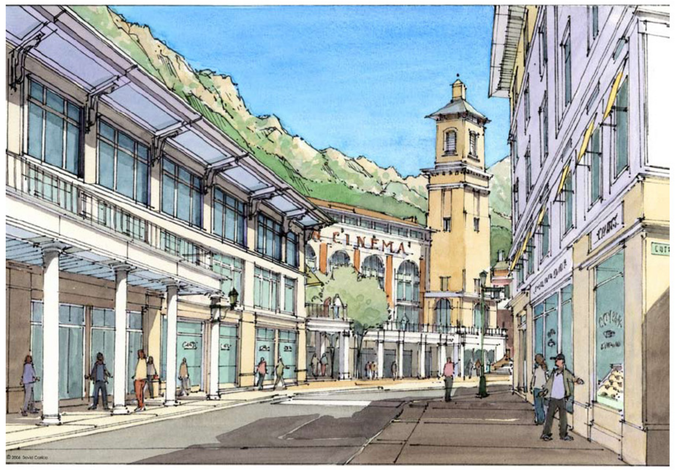
Conceptual Massing Renderings

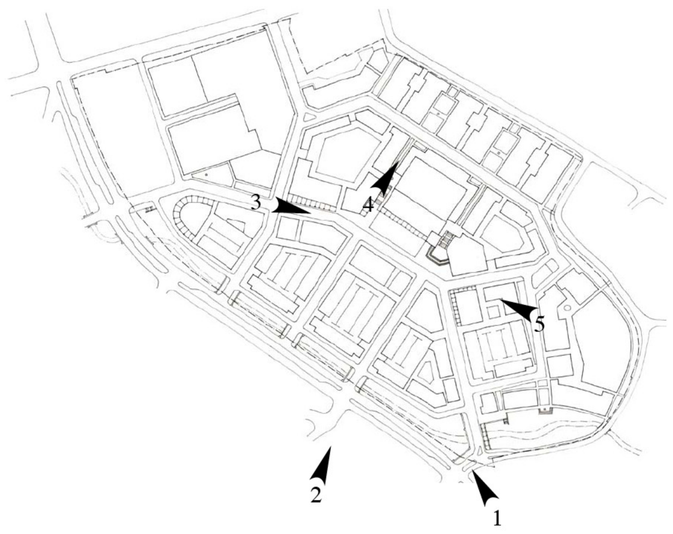
1. Project Aerial



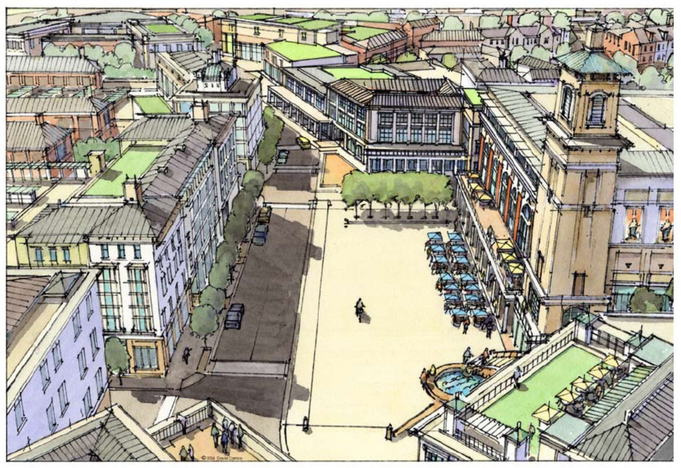
2. Creek View



3. Main Street



4. Townhouse Green



5. Town Center Plaza

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Site Parking Plan

Parking Design Standards

A.Size: Required parking stalls shall be rectangular with a minimum width of nine feet (9') and a minimum length of eighteen feet (18'), in accordance with table 1 of this section. If the stall is perpendicular to a curb, the length shall be measured from the curb face. Each parking stall shall have independent access from a driving aisle. A parking stall may contain less than eighteen feet (18') of pavement in length if all of the following conditions are met:
1. The stall has a standard six inch (6") curb face that will allow vehicles to extend over a landscaped area of no less than six feet (6') in width;
2. Each stall contains no less than sixteen feet (16') of pavement in length measured from curb face;
3. No pedestrian pathway or landscaping that prevents a standard vehicle from overhanging the curb is within two feet (2') of any curb face; and
4. All other requirements of this code are met.

B.Location: Required parking stalls shall not be located in delivery areas, service driveways, driving aisles, drive-in stacking lanes, shopping cart storage areas, or areas in front of overhead service doors. Designated loading space shall not encroach into any fire lane or pedestrian pathway.

C.Separation From Rights Of Way: Except as provided above, wheel or bumper guards shall be placed in parking stalls where necessary to prevent any part of a standard sized vehicle from extending beyond a parking stall boundary line, intruding on a pedestrian way, or contacting any wall, fence, or planting. A physical separation or barrier, such as vertical curbs, may be required in order to separate parking stalls from access to a second travel lane.

D.Layout: All off street parking stalls shall be designed in accordance with the dimensions and specifications set forth in table 1 and table 2 of this section.

E.Accessibility Requirements: All parking facilities shall comply with accessibility requirements of the city's then current building code. The number of accessible spaces required by the city's building code as of the enactment of this section is shown in table 3 of this section.

F.Markings: All required parking stalls shall be marked and maintained to be permanently visible.

G.Surface: Required parking stalls, loading spaces, maneuvering areas, and driving aisles shall be paved with asphalt, concrete, paving stone or masonry to a sufficient thickness to withstand repeated vehicular traffic, and shall be constructed according to the city's street standards and specifications.

H.Tables: **

TABLE 1

A (Angle)	B (Width Of Stalls)	C (Length Of Stalls)	D (Width Of Aisle)
0°	10'	22'	20 (12'*)
30°	9'	18'	20 (15'*)
45°	9'	18'	20 (15'*)
60°	9'	18'	24*
90°	9'	18'	24*

* One-way traffic only.

TABLE 2

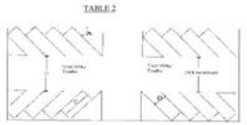


TABLE 3

Total Parking Stalls Provided On Property	Required Minimum Number Of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2 percent of total
1,001 and over	20 plus 1/100 stalls over 1,000

I.Parking Structures:
1. May cover all buildable area of a block.
2. Shall generally be concealed by liner buildings. Liner buildings shall be built up to the frontage lines and have a minimum depth of 20 feet.
3. The façade of a parking garage that is not concealed behind habitable space shall be screened to conceal all internal elements such as plumbing pipes, ducts and lighting. ramping shall be internalized and spandrels shall not be exposed.
4. Parking structure vehicular access at frontage lines shall be a maximum of 42 feet wide and shall be setback 20 feet from the frontage line.
5. Parking structures shall provide at least one pedestrian entrance directly onto the sidewalk in addition to any internal connections to the building served.

***** Site may consist of both parallel and angled parking.***

Life Safety /Fire Protection Requirements

Roads-
Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility or any portion of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. The building is equipped throughout with an approved automatic sprinkler system. Fire apparatus access roads shall have an unobstructed width of not less than 20-26 feet except for approved security gates or bollards. An unobstructed vertical clearance of not less than 13 feet 6 inches is required.

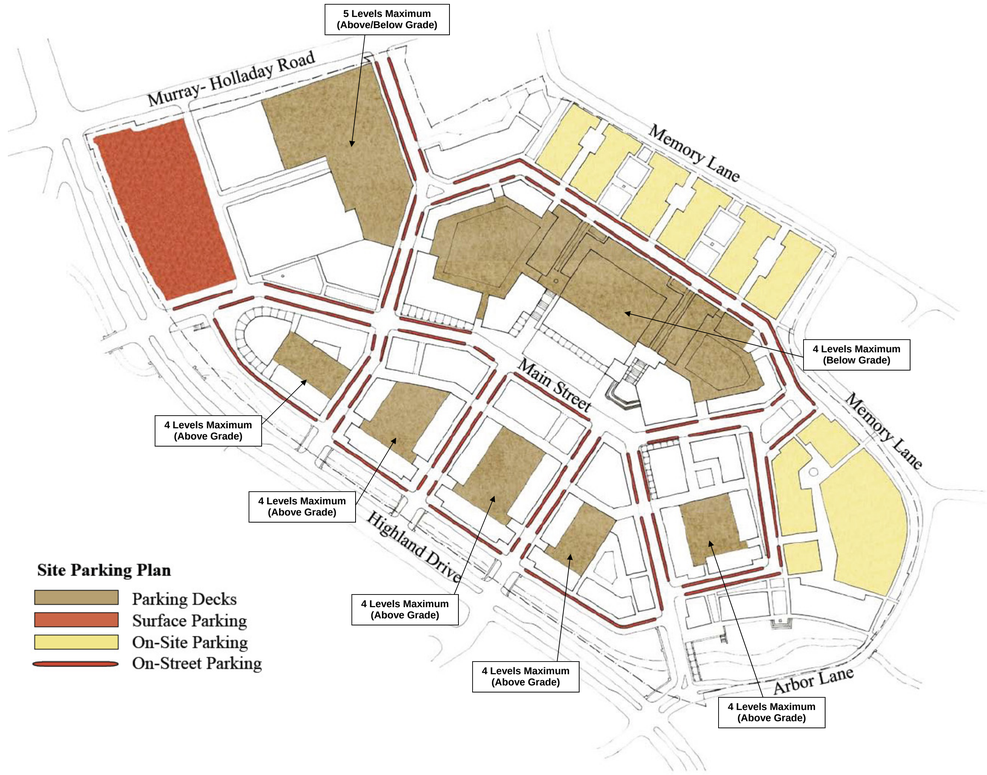
Fire apparatus access roads shall be designed to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities. A minimum 75,000 lb. road base/weight capacity is required.

Dead end fire apparatus roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

Bridges-
Where a bridge or elevated surface is part of a fire apparatus access road, the bridge shall be constructed in accordance with AASHTO Standard Specifications for Highway Bridges. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

Water Supply-
An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

Fire hydrants shall comply with Section 508.5.1 through 508.5.6.



Minimum Parking Requirements**

The Required Parking table summarizes the minimum parking requirements for each site or, conversely, the amount of building allowed on each site given the parking available. These numbers are subject to adjustment based on the accepted Shared Parking Analysis.

	RESTRICTED	LIMITED	OPEN
RESIDENTIAL	2.0/dwelling	1.5 / dwelling	1.0 / dwelling
LODGING		1.0 / bedroom	1.0 / bedroom
OFFICE		2.0/ 1000 sq. ft.	2.0 / 1000 sq. ft.
RETAIL			3.0 / 1000 sq. ft.
ASSEMBLY			1 / 5 seats

*****All Minimum Parking Requirements shall be required prior to each subdivision approval.***

General Parking Guidelines*

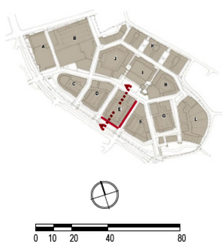
Parking Stalls (Reference from Walker/Desman)

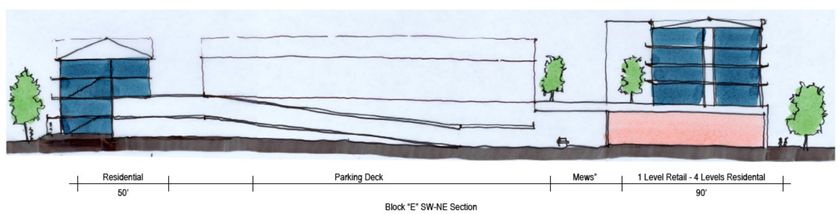
Site Parking Requirements Table

	Quantity	Ratio	Total Spaces	Max/Min
Retail	641,516	4.5/1000	2,887	Maximum
	481,137		2,165	Minimum
Office	130,709	3/1000	392	Maximum
	98,032		294	Minimum
Residential	614	1.86/DU	1,142	Maximum
	454		844	Minimum
Total			***4,421***	***Maximum***
			3,303	***Minimum***
Mixed Use Shared Parking Reduction		20%	-	Maximum
			661	Minimum
GRAND TOTAL			**4,421**	**Maximum**
			2,643	**Minimum**

****All Parking Ratios and Final Stall Counts subject to modification determined by Shared Parking Analysis and by overall Master Plan. General Parking Guidelines are calculated by ULI and ICSC Standards and Guidelines.***

Conceptual Parking Deck Cross Section Sample





Block "E" SW-NE Section

Draft Date: 12/11/07

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Site Average Parking Analysis

WALKER
PARKING CONSULTANTS

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Indianapolis, IN 46250

Voice: 317.842.6890
Fax: 317.577.6500
www.walkerparking.com

July 31, 2007

Walker Parking Consultants (or "Walker") is pleased to submit our findings regarding the shared parking analysis for the proposed Cottonwood Mall redevelopment in Holladay, Utah. We conclude that the planned parking supply of 4,253 parking spaces will be sufficient to accommodate the projected demand at Cottonwood Mall.

Walker's study projects that peak conditions will occur on a weekday in December at approximately 1:00 PM, at which time nearly 3,480 parking spaces will be demanded, a surplus to the planned supply of 4,253 parking spaces. Walker believes that the planned garages, lots and on street parking will be able to support peak parking conditions at Cottonwood Mall.

The weekend peak demand for Cottonwood Mall is projected to be about 3,425 parking spaces. This weekend peak demand is projected to occur at approximately 7:00 PM in December, and can be comfortably supported given the planned supply of 4,253 spaces. The following details our methodologies and findings regarding the Cottonwood Mall redevelopment.

SHARED PARKING DEMAND

When the provided program data was input into the model, along with adjustments for modal split and captive factors, the synergy between the different land uses and opportunities for shared parking could be identified. The peak shared parking demand of 3,480 spaces is projected to occur at 1:00 PM on a Weekday in December. This is a 25 percent reduction from the number of parking spaces required if all of the land uses were considered individually.

DRIVING RATIOS
Adjustments were made to account for the number of patrons who arrive at the development by means other than personal vehicle. Based on 2000 U.S. Census data, approximately 95 percent of employees drive or ride to work in a personal vehicle to Holladay, Utah. That is, it is assumed that 95% of the employees on the site arrive via personal vehicle, while the other 5% utilize another means of transportation, such as mass transit, bicycle, walking or riding with another driver.

NON-CAPTIVE RATIOS
Adjustments were also made to account for patrons on the site visiting more than one land use on the site. In this case, employees were assumed to visit the restaurants and retail uses. Demand is further reduced through the assumption that residents will visit the retail and restaurant uses. During the evenings, people will choose to walk to multiple locales instead of returning to their cars, and driving to their new destinations. A similar situation will occur during daytime hours. Office employees, over their lunch or after work, will choose to visit nearby retail and restaurant uses.

TIME OF DAY ADJUSTMENTS
The shared parking demand is the result of the model evaluating parking demand for each land use from 6:00 AM to midnight on weekdays and Saturdays for every month of the year. An additional analysis of the last week of December is included and considered a "thirteenth month." Special analysis is required due to the difference in parking demand patterns during this week of the month, as opposed to the first three weeks of December.

SHARED PARKING FINDINGS

Based on the analysis performed, the resultant peak demand after considering the variations of each of the land use demands by hour and month together is projected to occur at 1:00 PM on a Weekday in December. Walker projects a peak parking demand of approximately 3,480 spaces at this time. This equates to a blended project ratio, excluding residential, of 4.37 spaces per 1,000 sf.

No parking deficits are projected to occur during the year. The following graph illustrates the parking demand, by uses on the design peak demand day from 6:00 AM to Midnight. Based on the planned supply of 4,253 spaces, adequate parking is projected. The following graph and table identify parking demand by user in the peak month (December). A monthly demand graph follows.

SUMMARY OF FINDINGS

Based on the above analysis, Walker projects that adequate parking is planned to serve the proposed Cottonwood Mall redevelopment in Holladay, Utah. Changes to any of the stated assumptions, including changes to the location or quantity of the stated program data, may result in a change the number of parking spaces required. These findings assume program and planning data as received as of July 26, 2007.

Regards,

WALKER PARKING CONSULTANTS

Jody L. Todd, CPP
Parking Consultant

UNSHARED PARKING DEMAND

Base parking demand ratios, as found in the ULI Shared Parking model, as developed with Walker Parking Consultants, were used to determine the parking requirements for the development as if each component were a free-standing development.

Table 1: Base Parking Demand Ratios

	Weekdays Base Ratio Unit	Weekends Base Ratio Units
Community Shopping Center (<400 ksf)	2.90 /ksf GLA	3.20 /ksf GLA
Employee	0.70 /ksf GLA	0.80 /ksf GLA
Subtotal	3.60 /ksf GLA	4.00 /ksf GLA
Fine/Casual Dining	15.25 /ksf GLA	17.00 /ksf GLA
Employee	2.75 /ksf GLA	3.00 /ksf GLA
Subtotal	18.00 /ksf GLA	20.00 /ksf GLA
Fast Food	12.75 /ksf GLA	12.00 /ksf GLA
Employee	2.25 /ksf GLA	2.00 /ksf GLA
Subtotal	15.00 /ksf GLA	14.00 /ksf GLA
Cineplex	0.19 /seat	0.26 /seat
Employee	0.01 /seat	0.01 /seat
Subtotal	0.20 /seat	0.27 /seat
Office 25k to 100k sq ft	0.30 /ksf GLA	0.03 /ksf GLA
Employee	3.34 /ksf GLA	0.33 /ksf GLA
Subtotal	3.64 /ksf GLA	0.36 /ksf GLA
Medical/Dental Office	3.00 /ksf GLA	3.00 /ksf GLA
Employee	1.50 /ksf GLA	1.50 /ksf GLA
Subtotal	4.50 /ksf GLA	4.50 /ksf GLA
Grocery Store	3.50 /ksf GLA	3.70 /ksf GLA
Employee	0.60 /ksf GLA	0.50 /ksf GLA
Subtotal	4.10 /ksf GLA	4.20 /ksf GLA

Sources
1. *Shared Parking, 2nd Edition. Urban Land Institute, International Council of Shopping Centers, 200*
2. *Parking Generation, Third Edition. Washington DC: Institute of Transportation Engineers, 2004*
3. *Data collected by Team Members*
4. *John W. Dorsett, "Parking Requirements for Health Clubs" The Parking Professional April 2004*
5. *Gerald Salzman, "Hotel Parking: How Much is Enough?" Urban Land, January 1988.*
6. *Walker Parking Consultants*

Table 2: Unshared Parking Demand (Maximum parking demand)

	Quantity	Weekdays Base Ratio Unit	Unadj Pkg Sp	Weekends Base Ratio Units	Unadj Pkg Sp
Community Shopping Center (<400 ksf)	363,892	2.90 /ksf GLA	1,055	3.20 /ksf GLA	1,164
Employee		0.70	255	0.80	291
Fine/Casual Dining	44,729	15.25 /ksf GLA	682	17.00 /ksf GLA	760
Employee		2.75	123	3.00	134
Fast Food	22,052	12.75 /ksf GLA	281	12.00 /ksf GLA	265
Employee		2.25	50	2.00	44
Cineplex	2,696	0.19 /seat	512	0.26 /seat	701
Employee		0.01	27	0.01	27
Residential Guest	524	0.15 /unit	80	0.15 /unit	80
Residential Reserved	524	1.70 /unit	908	1.70 /unit	908
Office 25k to 100k sq ft	59,924	0.30 /ksf GFA	18	0.03 /ksf GFA	2
Employee		3.34	197	0.33	20
Medical/Dental Office	50,000	3.00 /ksf GFA	150	3.00 /ksf GFA	150
Employee		1.50	75	1.50	75
Grocery Store	50,000	3.50 /ksf GLA	175	3.70 /ksf GLA	185
Employee		0.60	30	0.50	25
Subtotal Customer/Guest Spaces			2,953		3,307
Subtotal Employee/Resident Spaces			757		616
Subtotal Reserved Spaces			908		908
Total Parking Spaces			4,618		4,831

Table 3: Shared Parking Demand

WEEKDAY

	Unadj Demand	Month Adj December	Pk Hr Adj 1:00 PM	Non Captive Daytime	Drive Ratio Daytime	Demand December 1:00 PM
Community Shopping Center (<400 ksf)	1055	100%	100%	90%	100%	950
Employee	255	100%	100%	100%	95%	242
Fine/Casual Dining	682	100%	75%	80%	100%	409
Employee	123	100%	90%	100%	95%	105
Fast Food	281	100%	100%	55%	100%	154
Employee	50	100%	100%	100%	95%	48
Cineplex	512	22%	45%	100%	100%	52
Employee	27	30%	60%	100%	95%	8
Residential Guest	80	100%	20%	100%	100%	16
Residential Reserved	908	100%	100%	100%	100%	908
Office 25k to 100k sq ft	18	100%	45%	100%	100%	8
Employee	197	100%	90%	100%	95%	168
Medical/Dental Office	150	100%	90%	100%	100%	135
Employee	75	100%	100%	100%	95%	71
Grocery Store	175	100%	100%	100%	100%	175
Employee	30	100%	100%	100%	95%	29
Subtotal Customer/Guest Spaces	2,873					1,884
Subtotal Employee Spaces	757					671
Subtotal Resident Spaces	988					924
Total Parking Spaces	4,618					3,479
					% reduction	25%

WEEKEND

	Unadj Demand	Month Adj December	Pk Hr Adj 7:00 PM	Non Captive Evening	Drive Ratio Evening	Demand December 7:00 PM
Community Shopping Center (<400 ksf)	1,164	100%	75%	95%	100%	829
Employee	291	100%	80%	100%	95%	221
Fine/Casual Dining	760	100%	95%	75%	100%	542
Employee	134	100%	100%	100%	95%	127
Fast Food	265	100%	80%	62%	100%	131
Employee	44	100%	90%	100%	95%	38
Cineplex	701	67%	80%	100%	100%	376
Employee	27	80%	100%	100%	95%	21
Residential Guest	80	100%	100%	100%	100%	80
Residential Reserved	908	100%	100%	100%	100%	908
Office 25k to 100k sq ft	2	100%	0%	100%	100%	0
Employee	20	100%	0%	100%	95%	0
Medical/Dental Office	150	100%	0%	100%	100%	0
Employee	75	100%	0%	100%	95%	0
Grocery Store	185	100%	75%	100%	100%	139
Employee	25	100%	80%	100%	95%	19
Subtotal Customer/Guest Spaces	3,227					2,017
Subtotal Employee Spaces	616					426
Subtotal Resident Spaces	988					988
Total Parking Spaces	4,831					3,431
					% reduction	29%

Table 4: Peak Day Parking Demand by Hour Dec: 6:00 AM to 9:00 PM

Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Community Shopping Center (<400 ksf)	9	47	142	285	522	712	855	950	950	950	902	807	802	752	651	501
Employee	24	36	97	182	206	230	242	242	242	242	242	230	230	230	218	182
Fine/Casual Dining	-	-	-	-	82	218	409	409	355	218	273	409	486	546	546	546
Employee	-	23	58	88	105	105	105	105	105	88	88	117	117	117	117	117
Fast Food	8	15	31	46	85	131	154	154	139	92	85	92	148	139	87	52
Employee	7	10	14	19	36	48	48	48	45	33	29	33	43	43	29	19
Cineplex Weekdays	-	-	-	-	-	-	24	53	65	65	65	71	71	94	118	118
Employee	-	-	-	-	-	-	6	8	8	10	10	13	13	13	13	13
Residential Guest	-	8	16	16	16	16	16	16	16	16	16	32	48	80	80	80
Residential Reserved	908	908	908	908	908	908	908	908	908	908	908	908	908	908	908	908
Office 25k to 100k sq ft	-	-	4	11	18	8	3	8	18	8	3	2	1	-	-	-
Employee	6	56	140	178	187	187	168	168	187	187	168	94	47	19	13	6
Medical/Dental Office	-	-	135	135	150	150	45	135	150	150	135	120	101	45	23	-
Employee	-	-	43	71	71	71	71	71	71	71	71	71	48	21	11	-
Grocery Store	2	9	26	61	114	149	166	175	166	158	158	166	166	166	140	88
Employee	3	4	11	21	24	27	29	29	29	29	29	27	27	27	26	21
Customer/Visitor	19	71	203	403	821	1,218	1,611	1,749	1,693	1,491	1,486	1,547	1,674	1,697	1,542	1,305
Employee	34	73	180	310	371	410	430	432	429	402	398	420	430	430	403	352
Residential Reserved	908	908	908	908	908	908	908	908	908	908	908	908	908	908	908	908
Residential Guest	0	8	16	16	16	16	16	16	16	16	16	32	48	80	80	80
Office/Medical Employees	6	56	183	249	258	258	239	239	258	258	239	165	95	40	24	6
Medical Office Patients/Visitors	0	0	135	135	150	150	45	135	150	150	135	120	101	45	23	0
TOTAL DEMAND	**967**	**1,116**	**1,625**	**2,021**	**2,524**	**2,960**	**3,249**	**3,479**	**3,454**	**3,225**	**3,182**	**3,192**	**3,256**	**3,200**	**2,980**	**2,651**
Planned Supply	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253	4,253
Parking Surplus	3,286	3,137	2,628	2,232	1,729	1,293	1,004	774	799	1,028	1,071	1,061	997	1,053	1,273	1,602

Table 5: Projected Parking Demand by Time of Day and Month (Weekday)

	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
January	955	1,080	1,524	1,842	2,221	2,527	2,688	2,850	2,815	2,592	2,587	2,701	2,776	2,767	2,588	2,276	1,997	1,637	1,181
February	955	1,080	1,526	1,846	2,228	2,536	2,695	2,850	2,811	2,585	2,581	2,695	2,771	2,757	2,570	2,256	1,977	1,620	1,169
March	956	1,088	1,542	1,884	2,301	2,643	2,824	2,984	2,932	2,687	2,688	2,815	2,909	2,897	2,693	2,350	2,053	1,668	1,183
April	48	1,087	1,540	1,879	2,290	2,623	2,799	2,956	2,907	2,665	2,666	2,790	2,880	2,867	2,663	2,325	2,031	1,653	1,178
May	956	1,090	1,547	1,895	2,321	2,669	2,864	3,033	2,984	2,735	2,738	2,869	2,966	2,963	2,760	2,407	2,097	1,700	1,199
June	956	1,090	1,548	1,897	2,327	2,676	2,890	3,077	3,034	2,785	2,787	2,926	3,022	3,032	2,843	2,488	2,160	1,749	1,231
July	956	1,085	1,526	1,865	2,287	2,637	2,872	3,071	3,034	2,783	2,786	2,935	3,035	3,070	2,898	2,556	2,221	1,802	1,265
August	957	1,088	1,535	1,885	2,324	2,686	2,915	3,097	3,048	2,793	2,797	2,946	3,049	3,069	2,873	2,514	2,182	1,763	1,235
September	956	1,087	1,541	1,880	2,290	2,625	2,794	2,947	2,896	2,655	2,655	2,777	2,866	2,847	2,640	2,301	2,009	1,635	1,168
October	956	1,089	1,546	1,892	2,317	2,665	2,847	3,002	2,946	2,696	2,698	2,828	2,923	2,907	2,693	2,343	2,044	1,659	1,175
November	961	1,096	1,566	1,935	2,379	2,737	2,934	3,104	3,050	2,802	2,803	2,934	3,030	3,022	2,807	2,434	2,101	1,692	1,191
December	967	1,116	1,625	2,021	2,524	2,960	3,249	3,479	3,454	3,225	3,182	3,192	3,256	3,200	2,980	2,651	2,243	1,751	1,197
Late December	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385	3,385

Weekday peak occurs at 1:00 PM
>Overall Peak

Available Site Development Parking compared to Average Required Parking based on Shared Parking Analysis

Figure 3: Parking Demand by User, Weekday in December

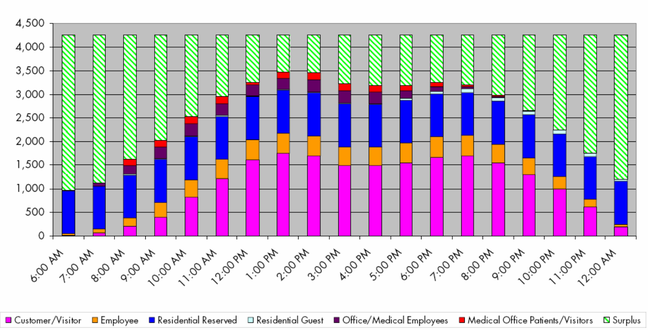
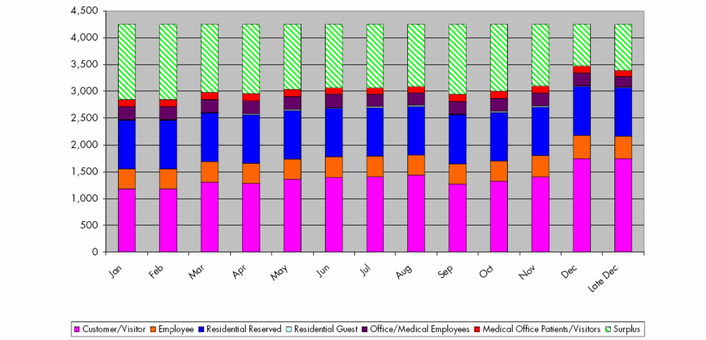


Figure 4: Projected Peak Hour Parking Adequacy by Month (1:00 PM on a Weekday)



* Current Parking Analysis Study of current Development Program. Should the current program increase more than 10%, a new study will be submitted to the City of Holladay for Review.

Draft Date: 12/11/07

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Chicago, Il 60606
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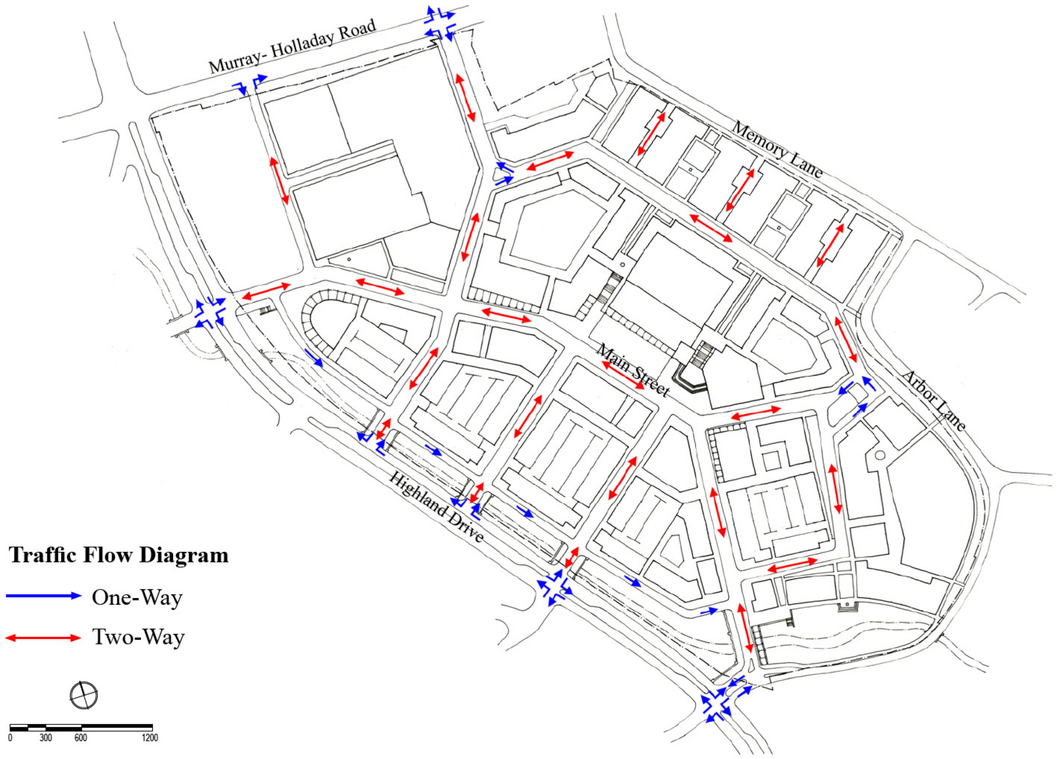
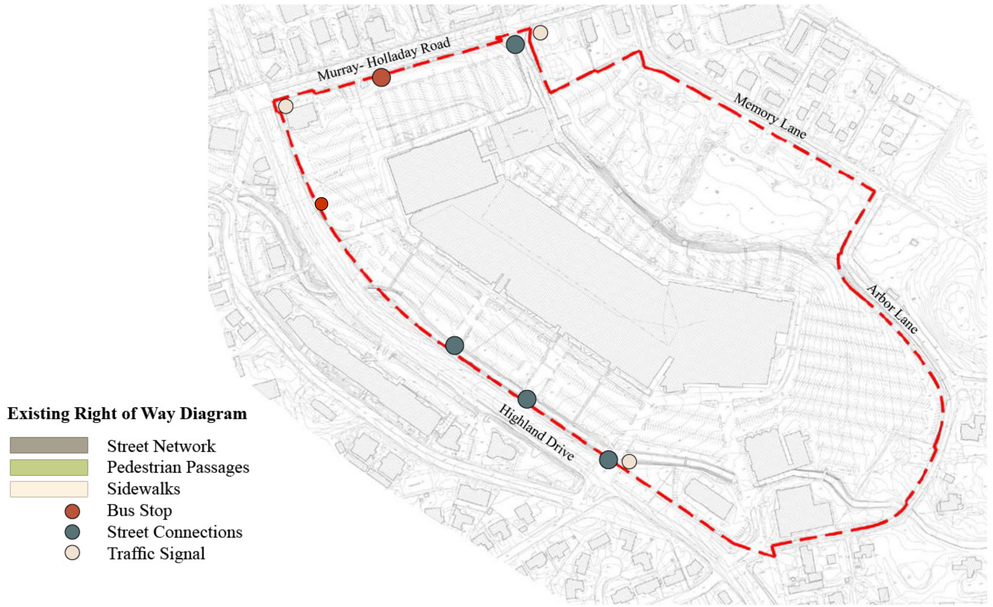
Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

DUANY PLATER - ZYBERK & CO.
ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Transportation Thoroughfares



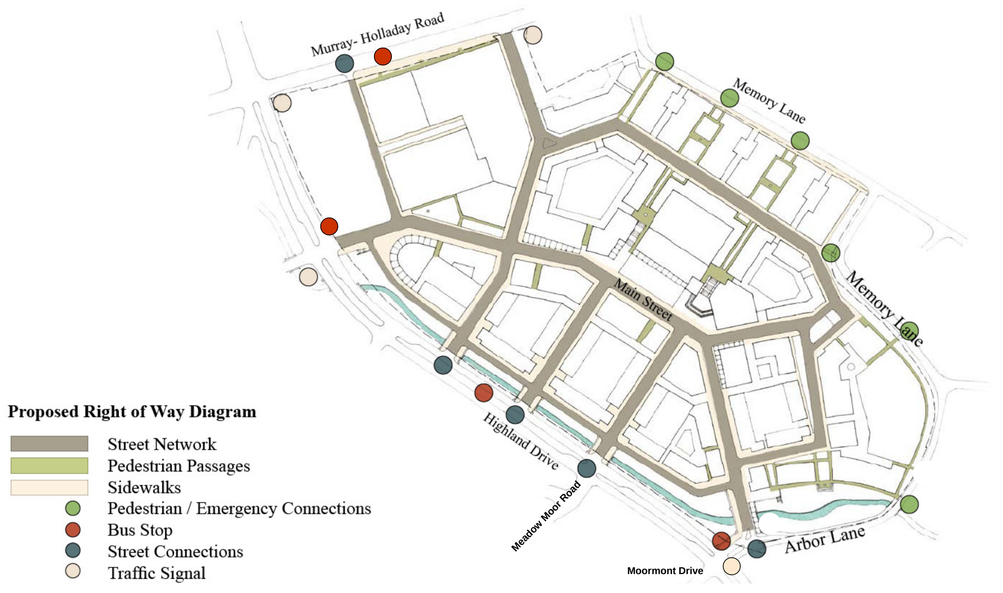


Traffic Control Plan During Construction

During Construction the following guidelines will be enforced in order to mitigate traffic impacts on neighborhood and surrounding community:

- Limited Construction Vehicle Access on Memory and Arbor Lanes
- Construction Access Points will ONLY be allowed on Highland Drive and Murray-Holladay Road
- Egress/Ingress for Site Construction Access to vehicles Prohibited on Arbor and Memory Lanes
- Signs will be placed on property limiting access for construction vehicles in neighborhood
- 24/7 Security Access will be provided to monitor Site Access

Traffic Control and Pedestrian Paths Plans



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Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co.
Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

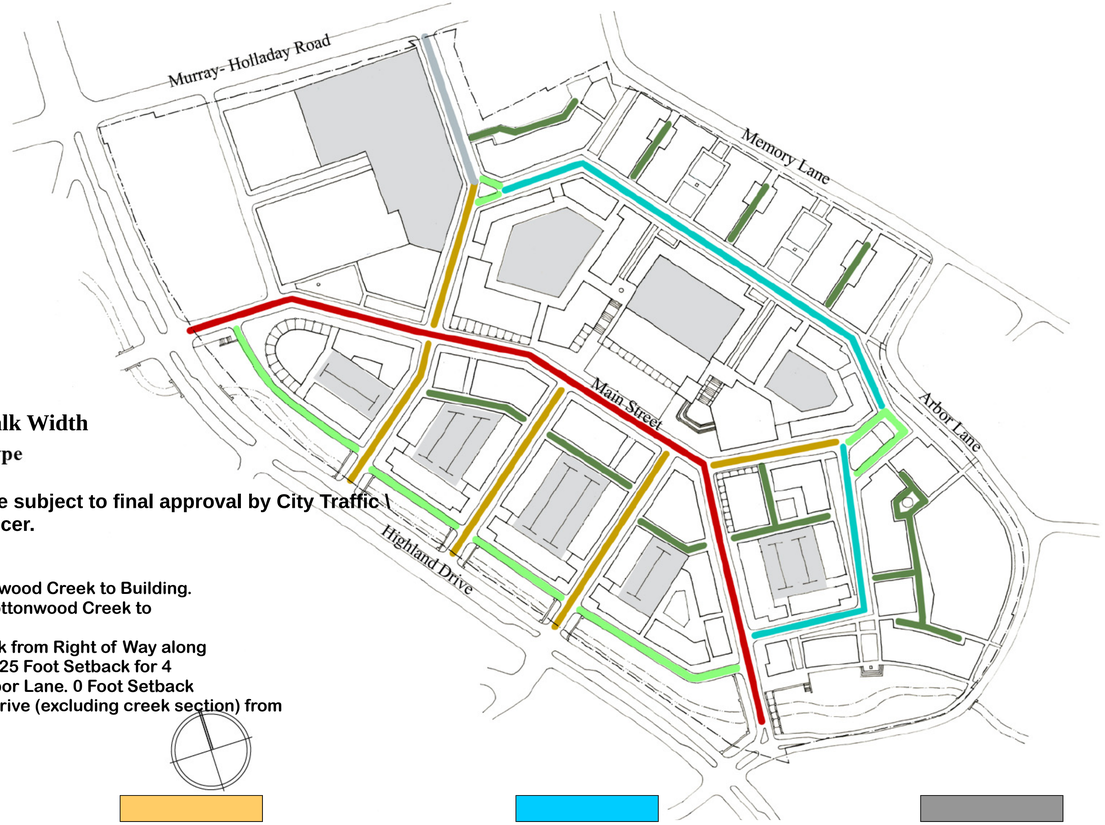
Thoroughfare Types and Street Cross Sections

Thoroughfare Types

AL: Alley
ST: Street
CS: Commercial Street

Garage
CS-78-38
CS-68-38
ST-62-38
ST-50-36
ST-35-20
AL-24-24

Street Width
Street + Sidewalk Width
Thoroughfare Type

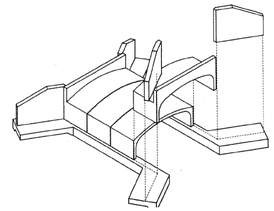


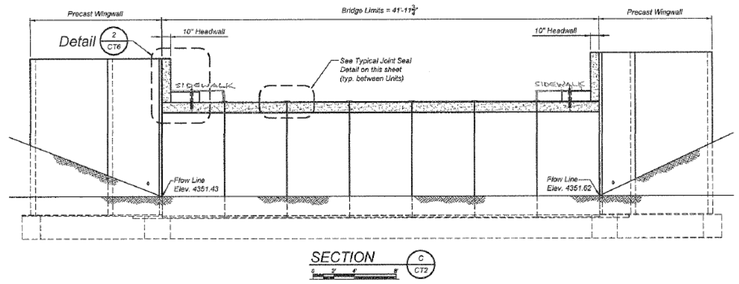
All turning radii on street cross-sections are subject to final approval by City Traffic \ Engineer and the City's Fire Prevention Officer.

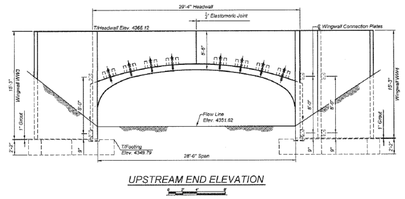
Setbacks:

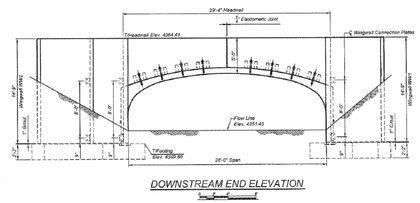
45 Foot Average Setback from Big Cottonwood Creek to Building. Minimum of 40 Foot Setback along Big Cottonwood Creek to Building.
Protected Zone: Minimum 10 Foot Setback from Right of Way along Memory Lane and Arbor Lane. Minimum 25 Foot Setback for 4 Single Family Lots over 0.20 Acres on Arbor Lane. 0 Foot Setback for Murray/Holladay Road and Highland Drive (excluding creek section) from Right of Way.

Bridge(s) Cross Sections



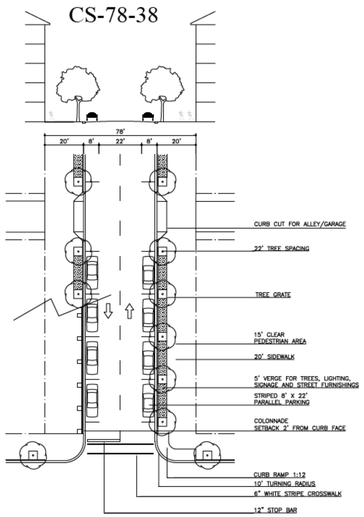




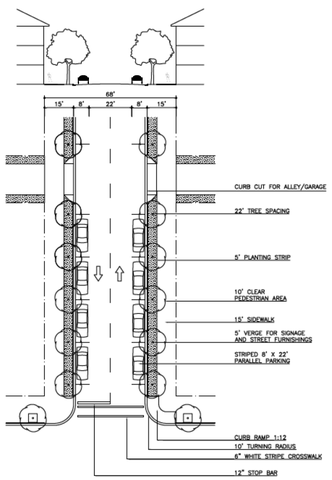


Bridge Section Details: Sidewalk length shall be 6 Feet or greater for Pedestrian access to site. Adequate measures of pedestrian protection from vehicular traffic will be included and submitted in the Building Permit Approval Process.

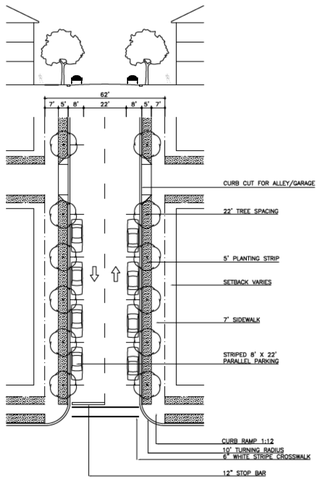
CS-78-38



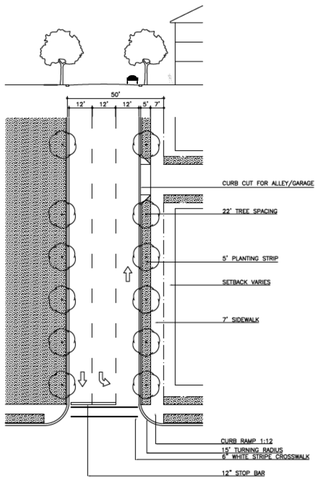
CS-68-38



ST-62-38



ST-50-36



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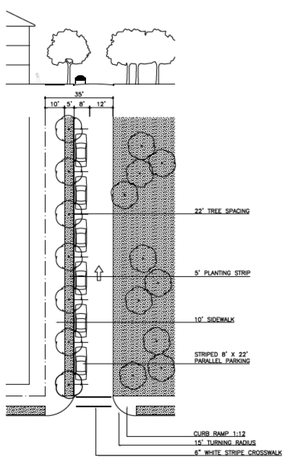
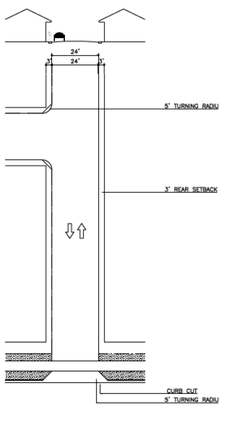


AL-24-24



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RTKL

Traffic Study and Impacts*

Traffic Study Impacts Summary

FINDINGS AND RECOMMENDATIONS

This section of the report provides a brief summary of the study findings and any recommendations developed to address the existing traffic conditions or the traffic impacts associated with the proposed project.

A. Roadway Segments
Based on the study findings, there are no roadway segment modifications necessary to address the mall entitlement or future development conditions. Some modification to the section of Highland Drive adjacent to the site will be necessary to accommodate the changes to the access plan and driveway locations along this project boundary.

B. Study Area Intersections
Based on the findings from the Existing, Mall Entitlements and Proposed Development Program evaluations, the only recommendation not associated with the site access and entry roads that should be considered is the optimization of timings at the E 45th S/Highland Drive intersections. The **Appendix** to this report includes the cycle lengths and phasing scenario identified in order to improve the intersection operations. The access drive configuration and locations, along with changes to the signalization plans will present a high quality level of access and circulation options for the development and will also provide the opportunity for proper distribution of traffic onto the external roadway network.

C. Traffic Calming
The results of the demographic analysis, the existing conditions evaluations and the findings from the license tag surveys conducted show currently that the majority of the traffic entering the neighborhoods to the west and east are not "cut through" or neighborhood traffic intrusion, but in fact are residents of those neighborhoods.

Based on the current conditions, our recommendation is to monitor the traffic as the project development occurs to see what changes in traffic patterns are occurring. Measures for dealing with any significant increase in cut through traffic could then be addressed through a formal traffic calming program.

Based on these findings, there are no current recommendations made for suggested traffic calming measures. However, should the local jurisdiction decide to implement any viable features, they should be analyzed to compare the benefits to potential negative impacts to the residents in those areas.

D. Access Plan
The proposed access system for the new Cottonwood development is shown on Figure 2 in a previous section of this report. As can be seen, the new system will not require major modification to the driveways/entry roads from Murray-Holladay Road. The proposed access plan does include modification to the location and function of the access points on Highland Drive. These changes include signalization of the northernmost connection, restrictions of the next two drives to the south to right-in/right-out only turning movements, and relocation of the signal at the Meadow Moor Road entrance to the Moor Mont/Arbor Lane entrance.

Each of these modifications are recommended to facilitate improved traffic flow and service along this corridor and to provided protected access at those points where volumes are anticipated to be highest. Each entrance will operate at a good level of service and the spacing between signals will be sufficient to provide for left-turn lanes and good traffic platooning.

Table 1
Existing/Previous **Development Trip Generation**
Cottonwood Mall (Existing Entitlements)

Land Use	ITE Code	Intensity	Daily Trip Ends	PM Peak-Hour Trip Ends				
				Total	In %	In Trips	Out %	Out Trips
Retail	820	734.7 KSF	24,826	2,335	48%	1,121	52%	1,214
Total			24,826	2,335		1,121		1,214
Pass-By	21%			490		235		255
Net External			24,826	1,844		885		959

Source: Glatting Jackson Kercher Anglin, Inc.
ITE Trip Generation Manual, 7th Edition
ITE Trip Generation Handbook, 2nd Edition

Table 2
Proposed Project Trip Generation
Cottonwood Mall

Land Use	ITE Code	Intensity	Daily Trip Ends	PM Peak-Hour Trip Ends				
				Total	In %	In Trips	Out %	Out Trips
Single Family	210	26 DU	301	32	63%	20	37%	12
Mid-Rise Apartment	223	461 DU	1,980	210	58%	122	42%	88
Townhouse/Condominium	230	114 DU	717	67	67%	45	33%	22
Movie Theater	444	53.9 KSF		205	64%	131	36%	74
Health / Fitness Club	492	20.3 KSF	668	82	51%	42	49%	40
Office	710	83.8 KSF	1,164	173	17%	29	83%	143
Retail	820	480.0 KSF	18,826	1,763	48%	846	52%	917
Supermarket	850	59.4 KSF	5,365	618	51%	315	49%	303
Total			29,021	3,149		1,550		1,599
Internal Capture	25.19%	24.81%	7,234	710		355		355
Pass-By (Health/Fitness)	0.00%	20.00%		12		6		6
Pass-By (Retail)	0.00%	28.71%		381		190		190
Pass-By (Supermarket)	0.00%	36.00%		167		84		84
Modal Split *		2.00%	580	63		31		32
Net External			21,206	1,816		884		932
	Daily	Pk-hour						

Source: Glatting Jackson Kercher Anglin, Inc.
ITE Trip Generation Manual, 7th Edition
ITE Trip Generation Handbook, 2nd Edition

Table 3
TRIP GENERATION OF AN EQUIVALENT PERMITTED POWER CENTER
Cottonwood Mall

Land Use	ITE Code	Intensity	Daily Trip Ends	PM Peak-Hour Trip Ends											
				Total	Enter %	Enter Trips	Exit %	Exit Trips	Internal Capture Enter	Internal Capture Exit	Pass-by %	Pass-by Enter	Pass-by Exit	Total In	Total Out
Apparel Store	870E	40.0 KSF	2,656	327	50%	163	50%	163	22	23				141	140
Book Superstore	868R**	40.0 KSF	7,812	781	52%	406	48%	375	37	46				369	329
Electronics Superstore	863R	60.0 KSF	2,702	270	49%	132	51%	138	26	23				106	115
Shopping Center	820E	200.0 KSF	10,656	789	49%	386	51%	402	48	42	32%	108	115	230	245
Free-standing Discount Superstore	813E	250.0 KSF	22,507	1,265	50%	633	50%	633	44	46				589	587
Office Supply Superstore	867R**	40.0 KSF	1,360	136	53%	72	47%	64	17	18				55	46
Home Improvement Superstore	862R	250.0 KSF	7,450	613	47%	288	53%	325	40	43				248	282
Toy/Children's Superstore	864R**	30.0 KSF	897	90	50%	45	50%	45	17	18				28	27
Pet Supply Superstore	866R**	40.0 KSF	1,984	198	50%	99	50%	99	17	18				82	81
Quality Restaurant	931R	10.0 KSF	900	75	67%	50	33%	25	10	0				40	25
High T/O Restaurant	932R	10.0 KSF	1,275	109	61%	67	39%	43	9	10	43%	25	14	33	19
Total		**970.0 KSF**	60,199	4,652		2,342		2,311	287	287		133	129	1,921	1,894

*Internal Capture calculated using FDOT TIPs program. Total internal capture is approximately 12.3%
**No daily rate is published by ITE. PM peak hour volume estimated at 10% of daily trip generation.
Source: Glatting Jackson Kercher Anglin, Inc.
ITE Trip Generation Manual, 7th Ed.
ITE Trip Generation Handbook, 2nd Ed.

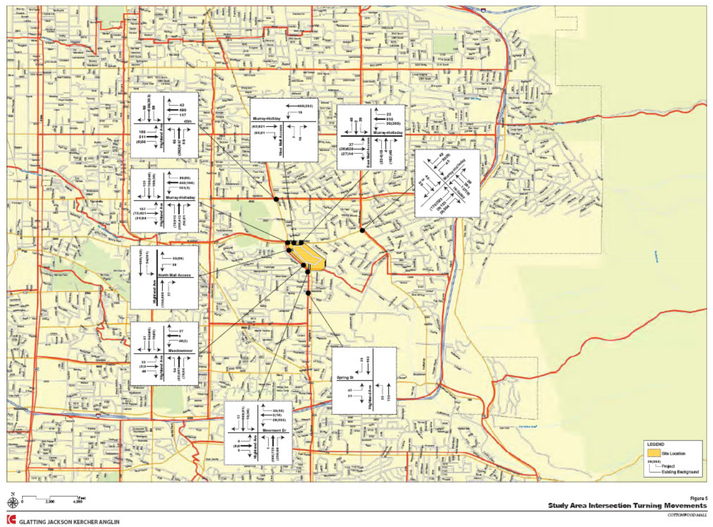
Table 4
Census Tract Population Distribution
Cottonwood Mall

Quadrant	Tract #	Population	% in Quad	Pop. in Quad	% of Total
NW	1114.00	6,515	100%	6,515	3.5%
	1049.00	2,903	100%	2,903	1.6%
	1048.00	5,138	50%	2,569	1.4%
	1117.00	6,644	100%	6,644	3.6%
	1118.00	7,916	100%	7,916	4.3%
	1104.00	7,455	20%	1,491	0.8%
	1119.01	7,725	100%	7,725	4.2%
	1119.02	7,336	100%	7,336	4.0%
	1107.01	3,365	100%	3,365	1.8%
	1108.00	5,245	20%	1,049	0.6%
Subtotal				*47,513*	**25.9%**
SW	1120.00	8,181	100%	8,181	4.5%
	1123.01	4,001	100%	4,001	2.2%
	1111.01	6,193	100%	6,193	3.4%
	1111.02	6,267	100%	6,267	3.4%
	1123.02	3,706	100%	3,706	2.0%
	1111.03	6,029	100%	6,029	3.3%
	1125.01	3,997	100%	3,997	2.2%
	1125.02	6,538	100%	6,538	3.6%
	1112.01	2,458	100%	2,458	1.3%
	1125.03	4,528	100%	4,528	2.5%
	1112.02	4,982	100%	4,982	2.7%
Subtotal				*56,880*	**31.0%**
NE	1048.00	5,138	50%	2,569	1.4%
	1103.00	5,572	100%	5,572	3.0%
	1102.00	4,914	100%	4,914	2.7%
	1104.00	7,455	80%	5,964	3.2%
	1005.00	6,184	100%	6,184	3.4%
	1101.03	3,336	100%	3,336	1.8%
	1107.02	4,753	100%	4,753	2.6%
	1106.00	5,692	100%	5,692	3.1%
	1108.00	5,246	80%	4,197	2.3%
	1109.00	4,640	100%	4,640	2.5%
	1101.04	5,242	100%	5,242	2.9%
Subtotal				*53,063*	**28.9%**
SE	1110.01	4,490	100%	4,490	2.4%
	1110.02	6,176	100%	6,176	3.4%
	1113.05	4,159	100%	4,159	2.3%
	1113.02	6,513	100%	6,513	3.5%
	1101.02	4,736	100%	4,736	2.6%
Subtotal				*26,074*	**14.2%**
			TOTAL:	*183,530*	*100.0%*

Table 5
EXISTING CONDITIONS ROADWAY LEVEL OF SERVICE
Cottonwood Mall

Roadway	Segment	Existing Lanes/ Facility Type	Accept. LOS	Pk-Hour Service Volume @ Std.	Existing Background PM Peak-Hour Directional Volumes NB/EB	SB/WB	Remaining Capacity	Peak Hour LOS
Murray-Holladay Road	S 13th E to Highland Drive	4LD	D	1,860	682	678	1,182	C
	Highland Drive to West Access	4LD	D	1,860	652	680	1,180	C
	West Access to East Access	4LD	D	1,860	679	683	1,177	C
	East Access to Holladay Boulevard	2LD	D	900	650	668	232	D
Spring Lane	S 13th E to Highland Drive	2LU	D	530	68	56	462	D
Highland Drive	Spring Lane to Moormont Drive	4LU	D	1,395	790	985	410	C
	Moormont Drive to Meadow Moor Road	4LD	D	1,860	785	1,018	842	C
	Meadow Moor Road to South Access	4LD	D	1,860	746	998	862	C
	South Access to Central Access	4LD	D	1,860	746	998	862	C
	Central Access to North Access	4LD	D	1,860	696	1,027	833	C
	North Access to Murray-Holladay Road	4LD	D	1,860	705	1,043	817	C
	Murray-Holladay Road - E 45th S	4LD	D	1,860	730	1,071	789	C

Source: Glatting Jackson Kercher Anglin, Inc.
FDOT Quality/Level of Service Handbook



* Current Traffic based on Average Study of current Development Program. Should the current program increase more than 10%, a new study will be submitted to the City of Holladay for Review.

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co. Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

Table 6
Existing Conditions - Intersections
Cottonwood Mall

Intersection	Stop Control	Intersection Conditions	EXISTING (YEAR 2007) APPROACH OVERALL	EB	WB	NB	SB
S 13th E @ Spring Lane	Two-Way Stop Control	LOS	D		D		B
		Delay (sec/veh)	25.1		25.1		10.2
		95% Queue (feet)			40		6
E 45th S @ Highland Drive	Signal	LOS	D	E	D	C	E
		Delay (sec/veh)	50	70.2	36.1	30.8	55.5
		95% Queue (feet)		1090	690	425	785
Highland Drive @ Mall North Access	Two-Way Stop Control	LOS	C		C		A
		Delay (sec/veh)	16.2		16.2		9.3
		95% Queue (feet)			14		5
Highland Drive @ Meadow Moor Road	Signal	LOS	C	C	C	C	C
		Delay (sec/veh)	26.3	32.3	32.8	22.8	27.8
		95% Queue (feet)		60	90	400	605
Highland Drive @ Moormont Drive	Two-Way Stop Control	LOS	D	D	D	B	A
		Delay (sec/veh)	32.5	32.5	26	10.6	9.6
		95% Queue (feet)		5	25	0	1
Moormont/Arbor @ Mall Access	Two-Way Stop Control	LOS	A	A			A
		Delay (sec/veh)	8.6	7.4			8.6
		95% Queue (feet)		3			1
Highland Drive @ Spring Lane	Signal	LOS	B	B		B	B
		Delay (sec/veh)	11	13.8		10.5	11.2
		95% Queue (feet)		35		260	345
Murray-Holladay Road @ Highland Drive	Signal	LOS	C	C	C	C	C
		Delay (sec/veh)	27	21.1	22	25.7	34.2
		95% Queue (feet)		245	300	300	610
Murray-Holladay Road @ Mall West Access	Two-Way Stop Control	LOS	B		A	B	
		Delay (sec/veh)	13.3		9.7	13.3	
		95% Queue (feet)			2	2	
Murray-Holladay Road @ Mall East Access	Signal	LOS	B	B	B	C	C
		Delay (sec/veh)	16.3	15.8	15.5	21.8	22.5
		95% Queue (feet)		310	275	45	75
Murray-Holladay Road @ Holladay Blvd.	Signal	LOS	C	C	C	C	D
		Delay (sec/veh)	31.5	24.9	21.7	25.7	41
		95% Queue (feet)		300	100	420	775

Source: Glatting Jackson Kercher Anglin Lopez Rinehart, Inc.

Table 8
Existing/Previous **Mall Entitlements - Intersections**
Cottonwood Mall

Intersection	Stop Control	Intersection Conditions	EXISTING MALL ENTITLEMENTS APPROACH OVERALL	EB	WB	NB	SB
S 13th E @ Spring Lane	Two-Way Stop Control	LOS	D		D		B
		Delay (sec/veh)	25.4		25.4		10.2
		95% Queue (feet)			42		6
E 45th S @ Highland Drive	Signal	LOS	F	F	D	D	F
		Delay (sec/veh)	89	93.1	44.1	45.1	141
		95% Queue (feet)		1225	750	725	1480
Highland Drive @ Mall North Access	Two-Way Stop Control	LOS	C		C		A
		Delay (sec/veh)	17.2		17.2		9.5
		95% Queue (feet)			66		0
Highland Drive @ Meadow Moor Road	Signal	LOS	C	C	C	C	C
		Delay (sec/veh)	27.1	32.3	32.8	23.7	29
		95% Queue (feet)		60	90	465	675
Highland Drive @ Moormont Drive	Signal	LOS	B	B	C	B	B
		Delay (sec/veh)	15.9	12.2	30.3	11.8	14.2
		95% Queue (feet)		15	415	320	440
Moormont/Arbor @ Mall Access	Two-Way Stop Control	LOS	B	A			B
		Delay (sec/veh)	11.8	8.2			11.8
		95% Queue (feet)		30			60
Highland Drive @ Spring Lane	Signal	LOS	B	B		B	B
		Delay (sec/veh)	11	13.8		10.5	11.2
		95% Queue (feet)		35		260	350
Murray-Holladay Road @ Highland Drive	Signal	LOS	D	C	C	C	D
		Delay (sec/veh)	35.5	26.9	30.7	28.3	47.7
		95% Queue (feet)		605	120	420	780
Murray-Holladay Road @ Mall West Access	Two-Way Stop Control	LOS	C		B	C	
		Delay (sec/veh)	15.1		10.4	15.1	
		95% Queue (feet)			2	2	
Murray-Holladay Road @ Mall East Access	Signal	LOS	C	B	B	C	C
		Delay (sec/veh)	20.1	18.2	16.9	28.2	20.5
		95% Queue (feet)		350	295	295	75
Murray-Holladay Road @ Holladay Blvd.	Signal	LOS	D	D	C	C	E
		Delay (sec/veh)	44.5	45.9	25.6	25.9	55.5
		95% Queue (feet)		605	120	420	780

Source: Glatting Jackson Kercher Anglin Lopez Rinehart, Inc.

Table 10
Proposed Development - Intersections
Cottonwood Mall

Intersection	Stop Control	Intersection Conditions	PROPOSED DEVELOPMENT APPROACH OVERALL	EB	WB	NB	SB
S 13th E @ Spring Lane	Two-Way Stop Control	LOS	D		D		B
		Delay (sec/veh)	25.4		25.4		10.2
		95% Queue (feet)			42		6
E 45th S @ Highland Drive	Signal	LOS	F	F	D	D	F
		Delay (sec/veh)	88.9	93.1	44.1	44.5	141
		95% Queue (feet)		1225	750	720	1480
E 45th S @ Highland Drive (Optimized signal)	Signal	LOS	D	E	D	C	C
		Delay (sec/veh)	40.5	71.1	36.1	26.1	33.5
		95% Queue (feet)		1090	690	540	880
Highland Drive @ Mall North Access	Two-Way Stop Control	LOS	C		C		B
		Delay (sec/veh)	19.1		19.1		11.4
		95% Queue (feet)			66		8
Highland Drive @ Meadow Moor Road	Signal	LOS	C	C	C	C	C
		Delay (sec/veh)	27.1	32.3	32.8	23.7	29
		95% Queue (feet)		60	90	465	675
Highland Drive @ Moormont Drive	Signal	LOS	B	B	C	B	B
		Delay (sec/veh)	15.9	12.2	30.3	11.9	14.3
		95% Queue (feet)		15	415	320	445
Moormont/Arbor @ Mall Access	Two-Way Stop Control	LOS	B	A			B
		Delay (sec/veh)	11.5	8.1			11.5
		95% Queue (feet)		25			55
Highland Drive @ Spring Lane	Signal	LOS	B	B		B	B
		Delay (sec/veh)	11	13.8		10.5	11.2
		95% Queue (feet)		35		260	345
Murray-Holladay Road @ Highland Drive	Signal	LOS	D	C	C	C	D
		Delay (sec/veh)	35.3	26.8	30.5	27.9	47.6
		95% Queue (feet)		310	490	410	900
Murray-Holladay Road @ Mall West Access	Two-Way Stop Control	LOS	C		B	C	
		Delay (sec/veh)	15.1		10.4	15.1	
		95% Queue (feet)			2	2	
Murray-Holladay Road @ Mall East Access	Signal	LOS	C	B	B	C	C
		Delay (sec/veh)	20.1	16	14.7	34.6	22.9
		95% Queue (feet)		330	275	380	80
Murray-Holladay Road @ Holladay Blvd.	Signal	LOS	D	D	C	C	E
		Delay (sec/veh)	44.3	45.4	25	25.9	55.5
		95% Queue (feet)		600	115	420	780

Source: Glatting Jackson Kercher Anglin Lopez Rinehart, Inc.

Table 7
EXISTING/PREVIOUS ENTITLEMENTS ROADWAY LEVEL OF SERVICE
Cottonwood Mall

Roadway	Segment	Existing Lanes/ Facility Type	Accept. LOS	Pk-Hour Service Volume @ Std.	Existing Background PM Peak-Hour Directional Volumes NB/EB	SB/WB	Project PM Peak-Hour Directional Volumes NB/EB	SB/WB	Total PM Peak-Hour Directional Volumes NB/EB	SB/WB	Remaining Capacity	v/C
Murray-Holladay Road	S 13th E to Highland Drive	4LD	D	1,860	662	678	103	187	765	865	995	0.47
	Highland Drive to West Access	4LD	D	1,860	652	680	125	199	777	879	981	0.47
	West Access to East Access	4LD	D	1,860	679	683	64	257	743	940	920	0.51
	East Access to Holladay Boulevard	2LD	D	900	650	668	194	205	844	873	27	0.97
Spring Lane	S 13th E to Highland Drive	2LU	D	530	68	56	68	58	136	114	394	0.26
Highland Drive	Spring Lane to Moormont Drive	4LU	D	1,395	790	985	416	447	1,206	1,432	-37	1.03
	Moormont Drive to Meadow Moor Road	4LD	D	1,860	765	1,018	152	121	917	1,139	721	0.61
	Meadow Moor Road to South Access	4LD	D	1,860	746	998	82	160	828	1,158	702	0.62
	South Access to Central Access	4LD	D	1,860	746	998	84	159	830	1,157	703	0.62
	Central Access to North Access	4LD	D	1,860	696	1,027	137	147	833	1,174	686	0.63
	North Access to Murray-Holladay Road	4LD	D	1,860	705	1,043	300	309	1,005	1,352	508	0.73
	Murray-Holladay Road - E 45th S	4LD	D	1,860	730	1,071	301	275	1,031	1,346	514	0.72

Source: Glatting Jackson Kercher Anglin, Inc.
FDOT Quality/Level of Service Handbook

Table 9
PROPOSED DEVELOPMENT ROADWAY LEVEL OF SERVICE
Cottonwood Mall

Roadway	Segment	Existing Lanes/ Facility Type	Accept. LOS	Pk-Hour Service Volume @ Std.	Existing Background PM Peak-Hour Directional Volumes NB/EB	SB/WB	Project PM Peak-Hour Directional Volumes NB/EB	SB/WB	Total PM Peak-Hour Directional Volumes NB/EB	SB/WB	Remaining Capacity	v/C
Murray-Holladay Road	S 13th E to Highland Drive	4LD	D	1,860	662	678	103	182	765	860	1,000	0.46
	Highland Drive to West Access	4LD	D	1,860	652	680	125	193	777	873	987	0.47
	West Access to East Access	4LD	D	1,860	679	683	63	252	742	935	925	0.50
	East Access to Holladay Boulevard	2LD	D	900	650	668	188	205	838	873	27	0.97
Spring Lane	S 13th E to Highland Drive	2LU	D	530	68	56	68	56	136	112	394	0.26
Highland Drive	Spring Lane to Moormont Drive	4LU	D	1,395	790	985	416	434	1,206	1,419	-24	1.02
	Moormont Drive to Meadow Moor Road	4LD	D	1,860	765	1,018	152	117	917	1,135	725	0.61
	Meadow Moor Road to South Access	4LD	D	1,860	746	998	82	155	828	1,153	707	0.62
	South Access to Central Access	4LD	D	1,860	746	998	82	155	828	1,153	707	0.62
	Central Access to North Access	4LD	D	1,860	696	1,027	134	143	830	1,170	690	0.63
	North Access to Murray-Holladay Road	4LD	D	1,860	705	1,043	291	304	996	1,347	513	0.72
	Murray-Holladay Road - E 45th S	4LD	D	1,860	730	1,071	292	270	1,022	1,341	519	0.72

Source: Glatting Jackson Kercher Anglin, Inc.
FDOT Quality/Level of Service Handbook

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

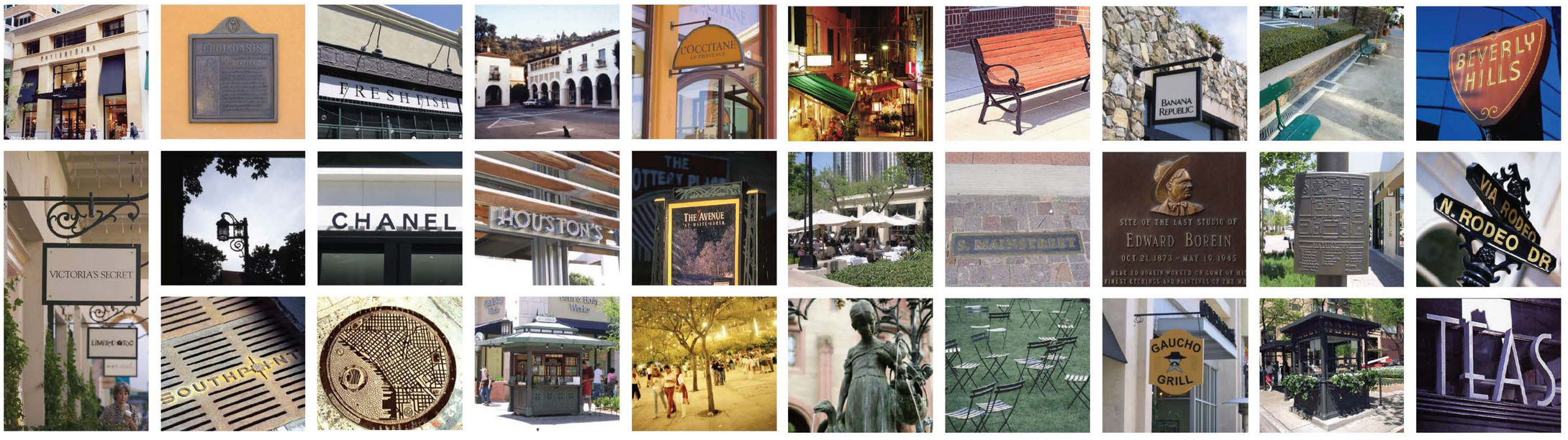
Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co.
Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

Streetscape Design Examples/Branding Precedents

Streetscape Design Examples

Signage and Branding Examples



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Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater-Zyberk & Co.
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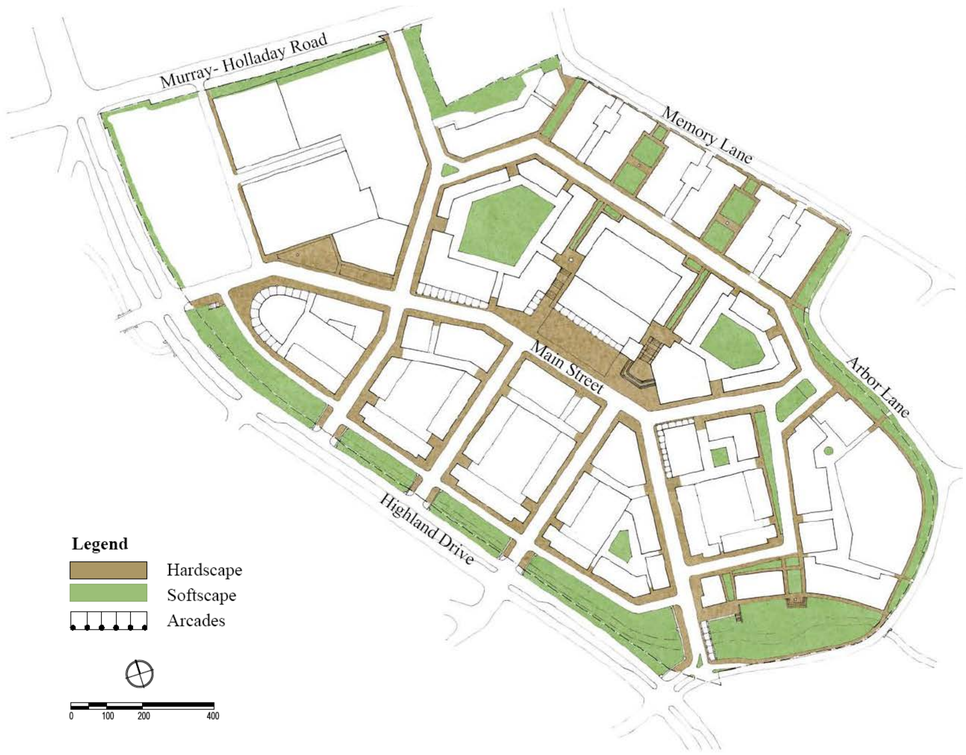
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

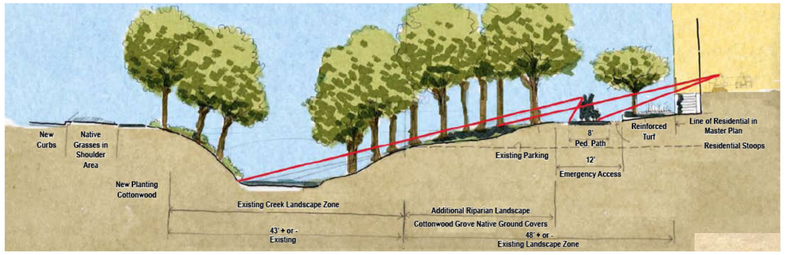
Conceptual Open/Gathering Space Plan

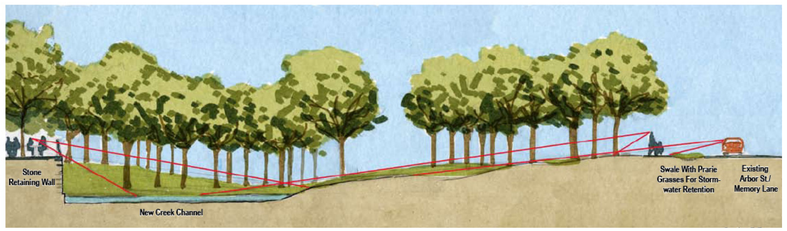
General Open Space Guidelines

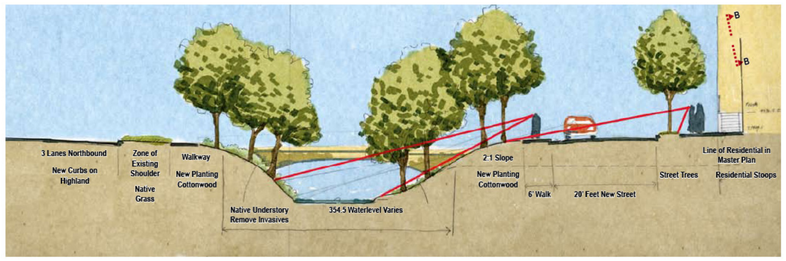
Open Space (Hardscape/Softscape) (Min/Max):
479,231 square feet/648,372 square feet
11.00 acres/14.88 acres
Private Streets (Min/Max):
440,577 square feet/596,074 square feet
10.11 acres/13.68 acres
Total Open Space + Private Streets (Min/Max):
919,808 square feet/1,244,447 square feet
21.12 acres/28.57 acres



Creek Cross Sections







City of Holladay

October 18, 2007

4580 S. 2300 E.
Holladay, Ut. 84117

ph. 801-272-9450
fax 801-272-9384

Price Development Company Limited Partnership
35 Century Park Way
SLC, UT 84115

RE: EXCEPTION FROM THE SETBACK FROM COTTONWOOD CREEK
4835 S Highland Dr
File #72-2-10-04

Dear Sirs:

This letter and the attached approved site plan constitute the exception to the setback from Cottonwood Creek approved by the City of Holladay Planning Commission on September 18, 2007 with the following conditions;

1. The setback from Big Cottonwood Creek shall be at no point closer than 40 feet, but an average equal to or greater than 45 feet for the whole site.
2. The motion pertained to building foundation footprints recognizing that there would be further encroachments relative to flat work, patios, and similar structures. At-grade improvements would be allowed as approved by the site development master plan.

All improvements which are required by the City of Holladay development ordinances or Planning Commission action must be installed or bonded for, prior to the final electrical inspection approval by the Building Inspector (power to panel), or if no electrical inspection is required, prior to the issuance of any occupancy permit for the land being developed.

If you should have any questions regarding this matter, please call me at 527-3890, and I will be happy to assist you.

Sincerely,

Alma Haskell
Planner

Note: General Growth Properties recognizes that significant vegetation will need to be removed and/or relocated during the creek relocation, however General Growth Properties will use all reasonable efforts to preserve native mature non-invasive species of vegetation during the redevelopment and construction process.

Illustrative Sample Specimens

1. Type: Plane Tree (Platanus occidentalis) Height: 90 - 150'

Notes: Also known as the Sycamore, the Plane Tree is large and well-suited tree for urban and suburban environments. Often found in backyards and parks.

2. Type: Smooth Leaf Elm (Ulmus carpinifolia) Height: 70 - 90'

Notes: Well-adapted for Utah's dry climate and fairly resistant to Dutch Elm Disease.

3. Type: Japanese Zelkova (Zelkova serrata) Height: 50 - 75'

Notes: An excellent shade tree that is tolerant of wind, heat, drought, and urban conditions. Makes for a good street tree and is used commonly in residential and commercial areas.

4. Type: Common Hackberry (Common occidentalis) Height: 40 - 60'

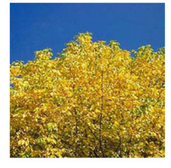
Notes: A tree that tolerates wind, alkaline soil, and urban pollution. Known as a good replacement for the American Elm.

5. Type: Big Tooth Maple (Acer grandidentatum) Height: 20 - 50'

Notes: Typically found in canyon bottoms and moist mountain sites, but can also be found in dryer areas. It is generally found between 4,500 and 7,500 feet elevation in north and central Utah.

6. Type: White Mulberry (Morus alba) Height: 30 - 60'

Notes: Grows well in warm, dry areas, and is resistant to drought. Often used as an ornamental shade tree in urban and suburban environments.



7. Type: Rocky Mountain Maple (Acer glablum) Height: 15 - 25'

Notes: Found near elevations of 5,000 feet, or higher. Found in both moist and arid climates, this tree is well-suited for Utah and its environment.

8. Type: Hornbeam Hedge (Carpinus Betulus) Height: Maintain at 3 - 6'

Notes: A hardy plant suitable for heavy and wet soils. Typically used as a divider between the private and public realm.

9. Type: Callery Pear (Pyrus Calleryana) Height: 20 - 40'

Notes: A tree that is well-suited for an urban environment. It is often used to line urban and suburban streets.

10. Type: Aspen (Populus tremuloides) Height: 20 - 50'

Notes: A fast growing tree that provides a finished look to suburban or urban areas. A "succession" tree that can seed quickly to areas of little vegetation, subject to disease.

11. Type: Cottonwood Tree (Populus fremontii) Height: 40 - 80'

Notes: The cottonwood tree grows only in wet soils, typically along the banks of creeks or rivers. Well-adapted to such environements in the southwest.

***All Landscaping and Vegetation will be sensitive to site as well as surrounding conditions.**
****All samples are representational of potential site vegetation and do not constitute all inclusive green and vegetative landscaping.**

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

DUANY PLATER - ZYBERK & CO. ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Sample Building Materials & Architectural Design Styles

National and International Precedents

Cottonwood Design Guidelines

The architectural vision of the Cottonwood Development is to create an urban realm with distinct places including a central plaza, a mixed-use main street, and residential edge streets. Architectural styles and variety, including a local vernacular or flavor, will create a cohesive architectural vision so that buildings are made to appear incremental as if developed over time.

The use of articulated buildings including corner and cornice details as well as façade embellishments will be a strong component of the architecture. Wherever feasible, window surfaces will be maximized at ground level creating a high degree of visibility in retail areas. Streets will be further articulated through the use of arcades, awnings, canopies, balconies, and signs. In the residential districts, porches and stoops will add to the variety of design to create a neighborhood sensibility. Careful planning for service areas, utilities, and infrastructure elements is required so that, to a significant extent, these are concealed by buildings, wall, gates, and landscaping.

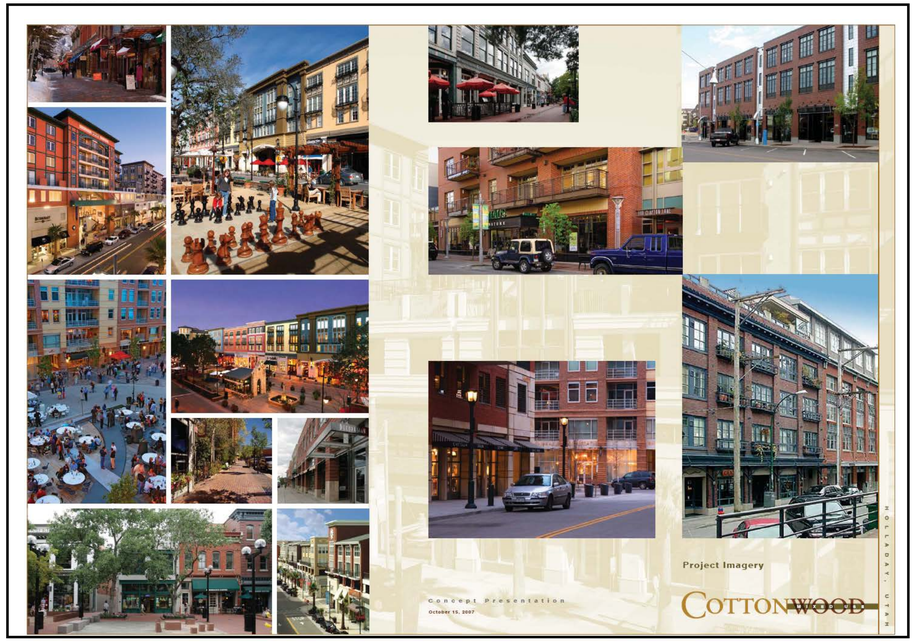
Use of a wide variety of building materials will be incorporated into the overall architectural design. Materials will include (but not be limited to) stone, brick, wood, stucco, metals, and glass. The materials palette will coincide with the goal of providing character and interest to individual buildings and the project as a whole. New, larger, single building uses will be designed so that they are well integrated into the project. Substantially single-material, lower quality “big box” style architecture will not be utilized. The scale and mass of the larger buildings will be softened through the use of articulation and building materials.

Details of the streetscape will be simple and include concrete, asphalt, and accent materials in focal areas. Elements included in the streetscape will include benches, kiosks, mobile merchandising units, pots, art, bike racks, and trash containers. Please refer to the examples shown on the Precedents & Branding page of the SDMP for streetscape elements and building materials.

All work within the project will be constructed and provisioned in a first-class workmanlike manner and free from all significant defects.

Regional Precedents

Mixed-Use Precedents



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Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater-Zyberk & Co.
Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

Conceptual Site Lighting & Signage Plan

Conceptual Site Lighting Standards

Lighting

USE	MAXIMUM ILLUMINATION
Civic spaces, playing fields and recreational areas	Foot candles must be within the parameters recommended by IESNA (Illumination Engineering Society of North America).
Store aprons	Limited to minimum of 1.0 foot candles and a maximum of 10 foot candles at grade, with a uniformity ratio no greater than 4:1.
Parking lots, loading and display areas	Limited to 2.5 foot-candles.
Spillover light	Limited to ½ foot-candle at the property line where adjacent to or Residential districts.

Light Levels & Mounting Directions

Parking Field – General lighting levels shall be a minimum of 2.0 FC. Every effort should be made to keep poles away from tenant storefronts when possible.

Boulevard / Life Style / Commercial areas – General lighting levels shall be a minimum of 2.0 FC maintained in traffic areas and 1.0 FC in pedestrian areas. Poles lighting the street vary from 12' to 18' and should not exceed 150 watt metal halide. Poles lighting the pedestrian area are to vary from 10' to 14.' Every effort should be made to keep poles away from tenant storefronts when possible or use directable optics so as to not wash out storefronts.

Fixture guidelines

Site poles to be concrete poles by Stress Crete. Heads are to be TFI flat lens or drop bottom lens depending on dark sky requirements. Decorative poles are to be 10' to 24' and meet the same mounting guidelines as the site poles.

Emergency egress

All HID fixtures used for emergency egress shall use electronic ballasts and quartz restrike lamps. Generators are preferred over inverters if possible. ATM machines must be treated special as these areas have different light level requirements.

Energy management*

Lighting fixture manufactures that practice the LEED or Green energy properties are to be given first design choice. Energy management system shall be a stand alone controllable relays system and shall be capable of being controlled by the malls current energy management system if desired. Programming of this system will need to be video taped and turned over to mall management for future use.

Sample lighting schedule for energy management:

Site lighting – Sunrise to 1 hour before sunset - Off
- 1 hour before sunset to closing – All on
- Closing to sunrise – Night lighting setback*

All lighting after closing – 25% - No perimeter

** Consult with mall operations for final schedule*

*Detailed Photometric Plan required as adopted by Planning Commission and City Council as an Appendix prior to building permit approvals.

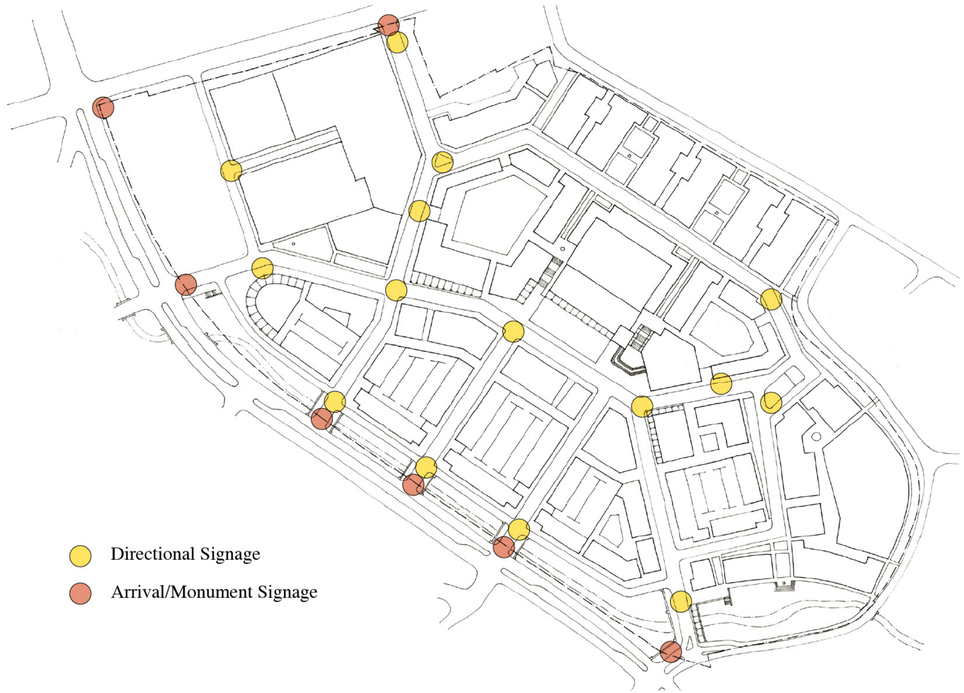
Conceptual Site Signage Standards*

SIGNAGE:

The graphic technique of imparting verbal and symbolic information, especially when applied to a building.
There are four fundamental types of signage:
1. Traffic signs and signals that are standardized by speed/perception research.
2. Monument signs are those that are applied to a structure independent of a building.
3. Signage that is applied directly to a building and referred to as wall signs.
4. Signage that is perpendicular to a building façade, to be seen by the pedestrian passerby, also referred to as blade or fin signs.

Retail Signage:
Retail signage shall be an integrated design to include the storefront, the entrance, and the signage.

Uniform signage regulations shall be provided to ensure aesthetic continuity.



Temporary Site Signage Criteria

Fencing Signage: Surrounding Area Proximity: Maximum limit of 6 Foot Height wrapping project fencing area
Development Signage: Limited to a maximum of 7 two-sided development signs on property with maximum square footage of 800 square feet per side.
Construction Banners: A Maximum of 1 (one) banner per building wall side with a maximum of 10% wall coverage.
Directional Signage: Limited to site entrances, relocated entrances, private roads, streets, and construction areas.

*Detailed Project Sign Criteria will be required as adopted by Planning Commission and City Council as an Appendix prior to building permit approvals.

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co.
Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

Utility Capacity & Availability

Qwest

1425 West 3100 South
Salt Lake City, Utah 84119

October 9, 2007
To whom it may concern:

RE: Availability of Qwest Facilities.

This letter concerns the provision of telephone facilities for.
Development: COTTONWOOD MALL REDEVELOPMENT
Location: 4835 South Highland Drive
Holladay, Utah

Represented by: Elizabeth Cole
Development Director
35 Century Parkway,
Salt Lake City, Utah 84115
Office- 801/463-4212

Notification for the above development has been presented to Qwest for review. Qwest Communications is a regulated public utility. If the developer elects to establish Qwest facilities within said development then service will be provided to the proposed development in accordance with the applicable tariffs on file with the Utah Public Service Commission.

If you have any questions regarding this matter, please contact me at (801) 974-8165.

Yours Truly,
DeAnne Powell
Design Engineer

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

12840 Pony Express Road
Draper, Utah 84020

October 9, 2007

To Whom It May Concern:

This is to advise you of our ability to provide electrical service to the **Cottonwood Mall** project located at **4835 South Highland Drive; Holladay, Utah** with the Electric Service Regulations on file with the Utah Public Service Commission and upon completion of necessary contracts and agreements.

Lori Hansen
Rocky Mountain Power

QUESTAR

Questar Corporation
180 East 100 South
P.O. Box 45433
Salt Lake City, UT 84145-0433
Tel 801 324 5555

October 15, 2007

City Of Holladay
4615 Holladay Blvd.
Salt Lake City, Utah 84117-5212

Alma Haskell:

Re: Cottonwood Mall. Salt Lake City, Utah

Natural gas can be made available to serve Cottonwood Mall Salt Lake City, Utah development when the following requirements are met:

1. Developer provides plat maps, drawings, construction schedules, average size of homes, units, and/or buildings that will be served by natural gas, and any and all other relevant information regarding commercial and residential uses, including but not limited to, proposed natural gas appliances (number and type of appliances per unit, home, building).

2. Review and analysis by Questar Gas Engineering and/or Preconstruction Department to determine load requirements, system reinforcement requirements and estimated costs to bring natural gas to the development.

Upon completion of Questar Gas review of the developments natural gas requirements, agreements will be prepared, as necessary, for high pressure, intermediate high pressure and/or service line extensions required to serve the development. These service extensions must be paid in advance, but may qualify for credits or refunds, as provided in Questar Gas tariff.

To accommodate your construction schedule and provide cost estimates to you, please contact me at your earliest convenience.

Sincerely,
Dan Perea

SALT LAKE CITY SUBURBAN
SANITARY DISTRICT #1
3932 SOUTH 500 EAST
SALT LAKE CITY, UTAH 84107-1895
PHONE 262-2904
FAX # 265-0551

CHAIRMAN
EMIL MEYER

TRUSTEES
LYLE S. FORD
RUTH ADAMS

GENERAL MANAGER
KERRY S. EPPICH

COUNSEL
KIRTON & MCCONKIE

October 24, 2007

Mr. Brian Bennion, Director
Bureau of Water Quality
788 East Woodoak Lane
Murray, Utah 84107

PROJECT: Cottonwood
ADDRESS: 4835 South Highland Drive
DEVELOPER: General Growth Properties, Inc.
REF. #: Holladay City
DISTRICT #: 2007096

Dear Mr. Bennion:

This will advise that **SALT LAKE CITY SUBURBAN SANITARY DISTRICT #1** agrees to provide sanitary sewer service to this property subject to the following: **Conformity by the developer with the Rules and Regulations and Technical Specifications for Salt Lake City Suburban Sanitary District #1 and Salt Lake County and Laws and Ordinances.**

All Pretreatment requirements of the District must be met.

Payment of all applicable fees, (when the capacity fee is paid an account is opened and the property goes into billing).

Development of site so as to provide proper slope of sanitary sewer mains and laterals, in addition to the minimum required cover. It is the developers responsibility to field verify all elevations. (Developer must contact the District prior to any outside sewer work being done).

Connection by the developer of sanitary sewer mains to existing mains as recommended by our Engineer.

Duplexes and Twin Homes require two lateral lines.

Granting of easements to the District for sanitary sewer mains on private property.

Because of the growth in the District and this commitment of system capacity for service, this service commitment is good for one year from the above date. Unless there is construction activity on this property after the above date, a new letter must be obtained from the District.

Enclosed herewith is a preliminary drawing of the above project showing the existing sanitary sewer extension.

Sincerely,

Kerry S. Eppich, General Manager
Salt Lake City Suburban Sanitary District #1

Don E. Telford, P.E., District Engineer

Enclosure: One copy of Preliminary Sanitary Sewer layout

cc: General Growth Properties, Inc.

Additional Capacity Letters to be Submitted to City of Holladay Prior to Subdivision Approval:

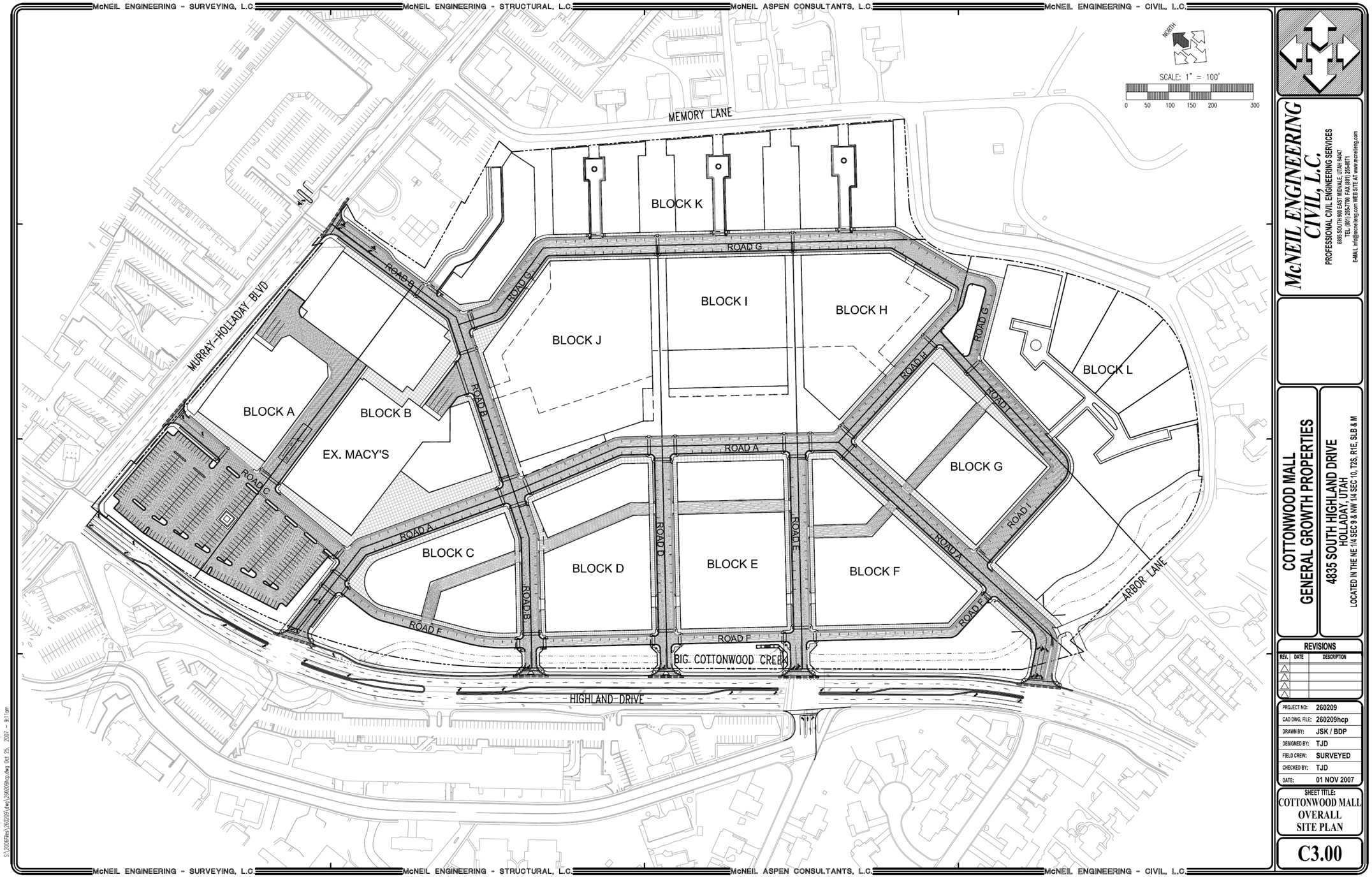
. Salt Lake City Water Corporation
. Holliday Water Company

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

DUANY PLATER - ZYBERK & CO. ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Civil Plans - Site Plan



McNEIL ENGINEERING CIVIL, L.C.
PROFESSIONAL CIVIL ENGINEERING SERVICES
6995 SOUTH 900 EAST MIDVALE, UTAH 84047
TEL. (801) 255-0700 FAX (801) 255-8071
E-MAIL: info@mcneileng.com WEB SITE AT: www.mcneileng.com

COTTONWOOD MALL
GENERAL GROWTH PROPERTIES

4835 SOUTH HIGHLAND DRIVE
HOLLADAY, UTAH
LOCATED IN THE NE 1/4 SEC 9 & NW 1/4 SEC 10, T2S, R1E, SLB & M

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	260209
CAD DWG. FILE:	260209hcp
DRAWN BY:	JSK / BDP
DESIGNED BY:	TJD
FIELD CREW:	SURVEYED
CHECKED BY:	TJD
DATE:	01 NOV 2007

SHEET TITLE:
COTTONWOOD MALL
OVERALL
SITE PLAN

C3.00

S:\2006\Plats\260209\dwg\260209hcp.dwg Oct 25, 2007 - 9:11am

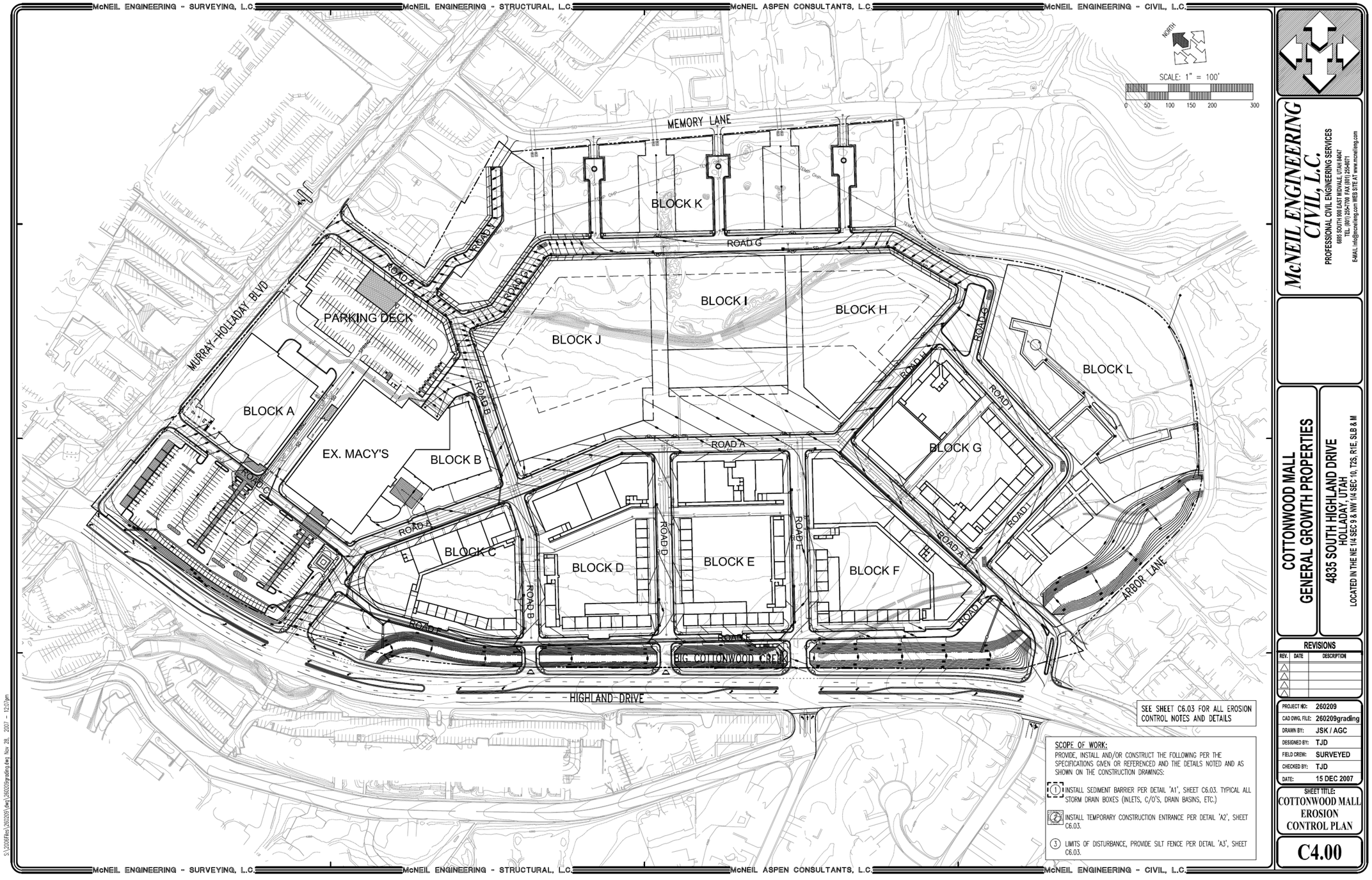
Draft Date: 12/11/07

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

DUANY PLATER-ZYBERK & CO. ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Civil Plans - Grading and Drawings



General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood

Site Development Master Plan - Regional Mixed-Use Development

City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co. Architects and Town Planners

Torti Gallas and Partners

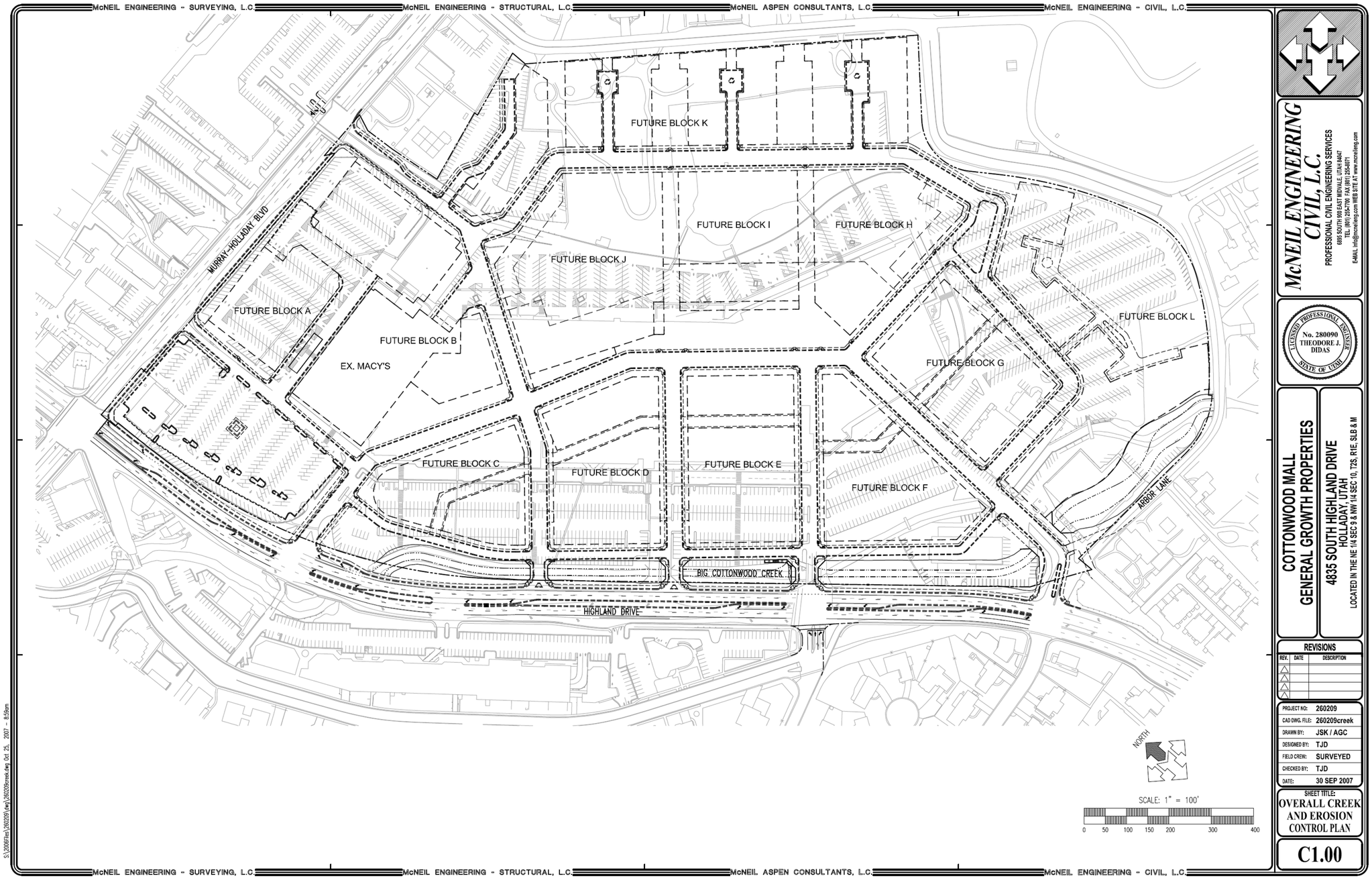
McNEIL Engineering, Inc.

SB Architects

SASAKI

RTKL

Civil Plans - Creek Relocation



McNEIL ENGINEERING CIVIL, L.C.
PROFESSIONAL CIVIL ENGINEERING SERVICES
6965 SOUTH 1900 EAST WEST JORDAN, UTAH 84047
TEL: (801) 255-0529 FAX: (801) 255-4301
EMAIL: info@mcneileng.com WEB SITE: www.mcneileng.com

LICENSED PROFESSIONAL ENGINEER
No. 280090
THEODORE J. DIDAS
STATE OF UTAH

COTTONWOOD MALL
GENERAL GROWTH PROPERTIES

4835 SOUTH HIGHLAND DRIVE
HOLLADAY, UTAH
LOCATED IN THE NE 1/4 SEC 9 & NW 1/4 SEC 10, T2S, R1E, SLB & M

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	260209
CAD DWG. FILE:	260209creek
DRAWN BY:	JSK / AGC
DESIGNED BY:	TJD
FIELD CREW:	SURVEYED
CHECKED BY:	TJD
DATE:	30 SEP 2007

SHEET TITLE:
OVERALL CREEK AND EROSION CONTROL PLAN

C1.00

S:\260209\civil\260209creek.dwg, Oct 25, 2007 - 8:59am

McNEIL ENGINEERING - SURVEYING, L.C. McNEIL ENGINEERING - STRUCTURAL, L.C. McNEIL ASPEN CONSULTANTS, L.C. McNEIL ENGINEERING - CIVIL, L.C.

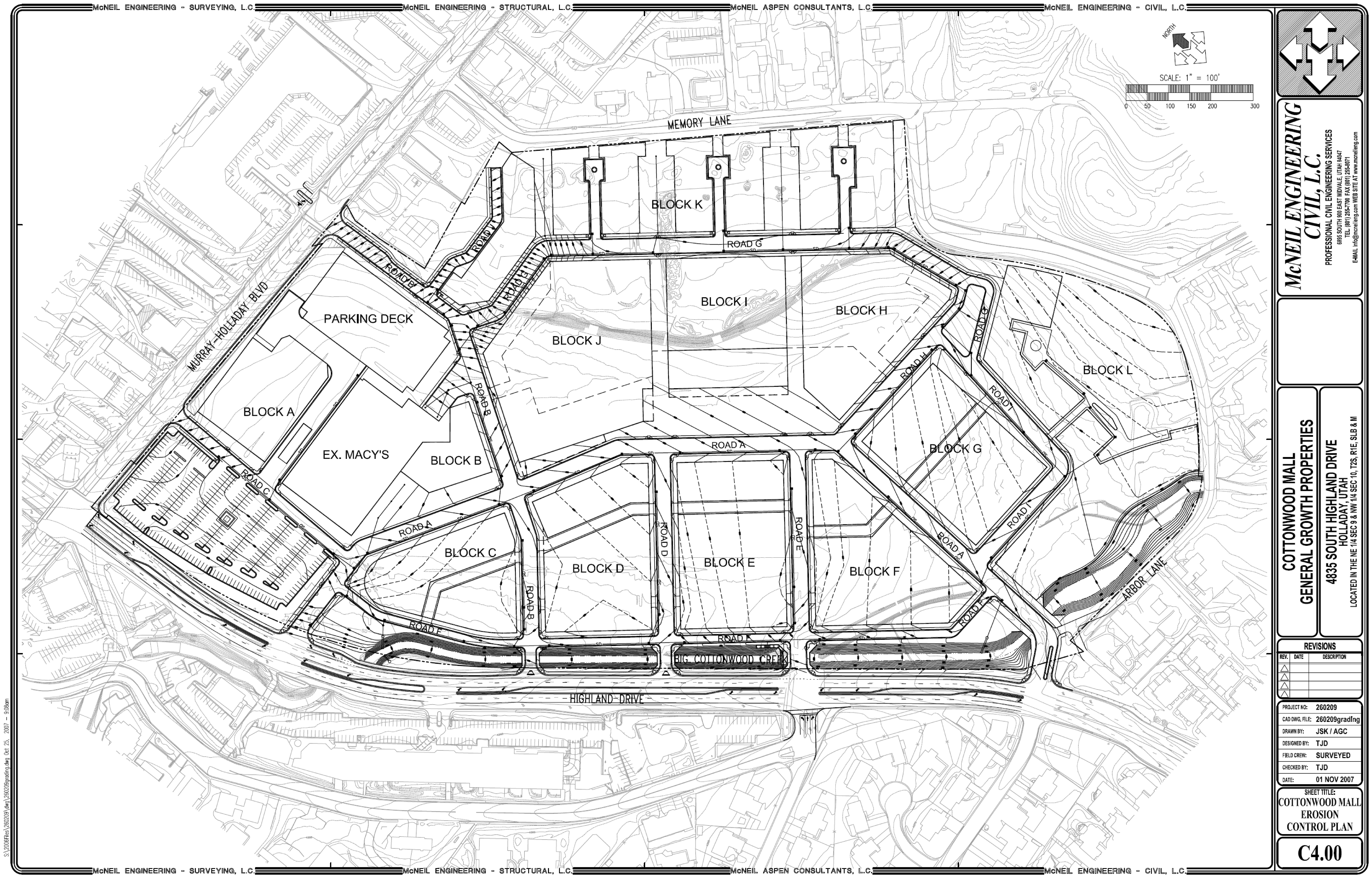
Draft Date: 12/11/07

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

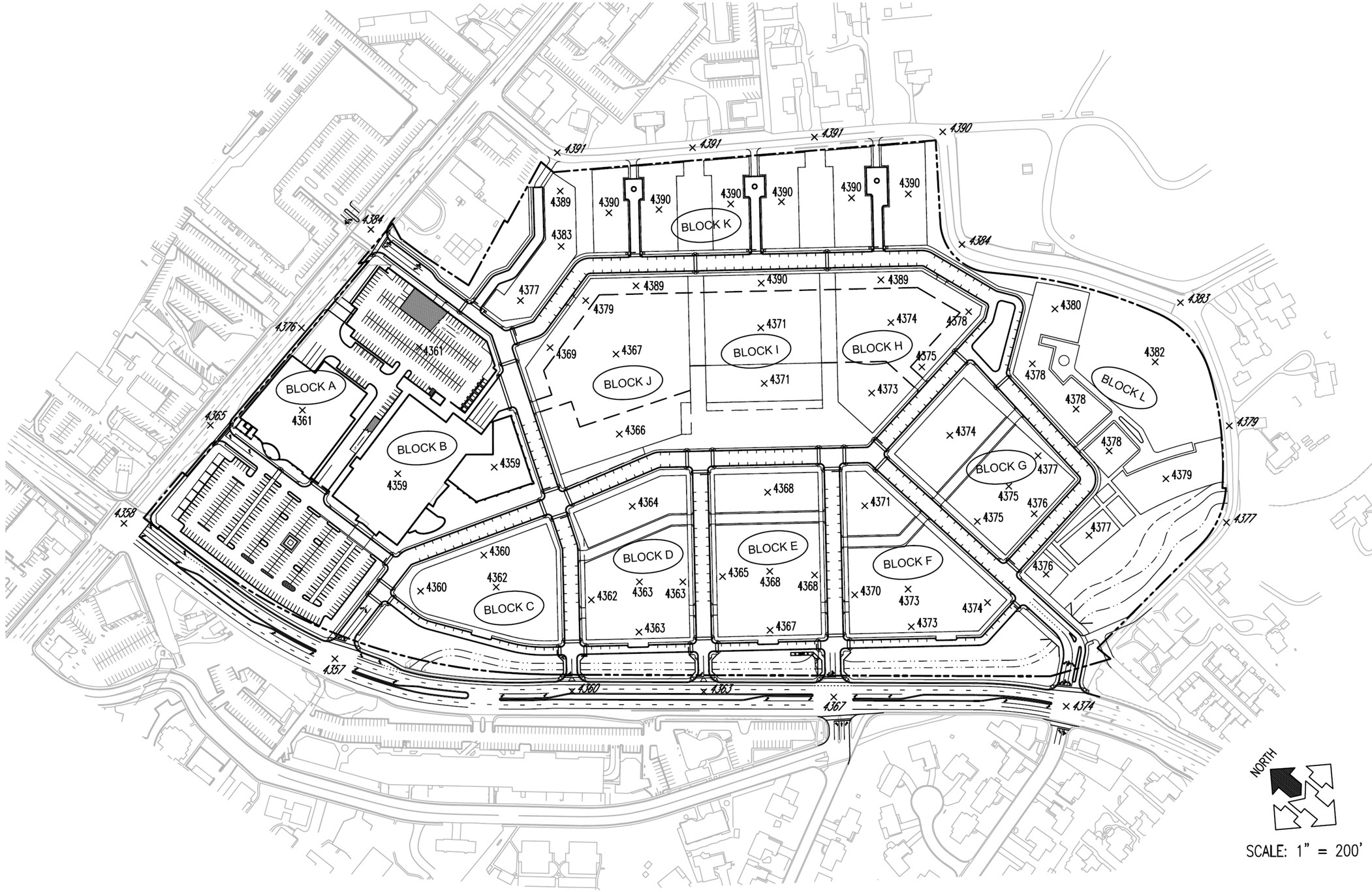
DUANY PLATER-ZYBERK & CO. ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Civil Plans - Grading


McNEIL ENGINEERING - SURVEYING, L.C.
McNEIL ENGINEERING - STRUCTURAL, L.C.
McNEIL ASPEN CONSULTANTS, L.C.
McNEIL ENGINEERING - CIVIL, L.C.
NORTH
SCALE: 1" = 100'
0 50 100 150 200 300
MEMORY LANE
BLOCK K
ROAD G
BLOCK I
BLOCK H
BLOCK J
BLOCK L
PARKING DECK
MURRAY-HOLLADAY BLVD
BLOCK A
EX. MACY'S
BLOCK B
ROAD A
BLOCK G
ROAD C
BLOCK C
BLOCK D
BLOCK E
BLOCK F
ROAD B
ROAD D
ROAD E
ROAD F
ROAD H
ROAD I
ROAD K
ARBOR LANE
BIG COTTONWOOD CREEK
HIGHLAND DRIVE
McNEIL ENGINEERING CIVIL, L.C.
PROFESSIONAL CIVIL ENGINEERING SERVICES
COTTONWOOD MALL
GENERAL GROWTH PROPERTIES
4835 SOUTH HIGHLAND DRIVE
HOLLADAY, UTAH
REVISIONS
REV. DATE DESCRIPTION
PROJECT NO: 260209
CAD DWG. FILE: 260209grading
DRAWN BY: JSK / AGC
DESIGNED BY: TJD
FIELD CREW: SURVEYED
CHECKED BY: TJD
DATE: 01 NOV 2007
SHEET TITLE:
COTTONWOOD MALL
EROSION
CONTROL PLAN
C4.00

Draft Date: 12/11/07

Civil Plans - Center Building Proposed Elevations



SCALE: 1" = 200'

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Chicago, Il 60606
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Cottonwood

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City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co.
Architects and Town Planners

Torti Gallas and Partners

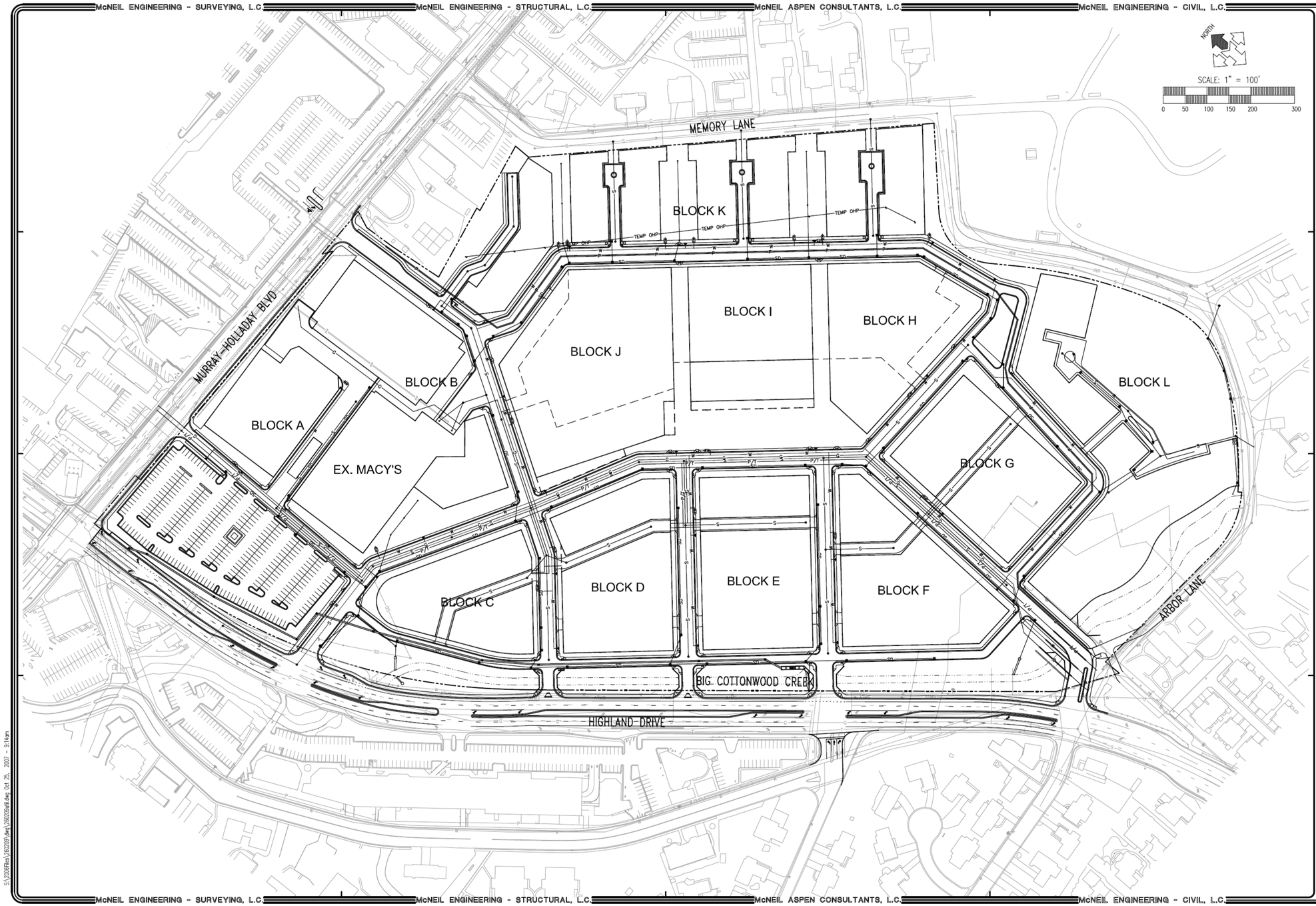
McNEIL Engineering, Inc.

SB Architects

SASAKI

RTKL

Civil Plans - Site Utility Plan



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6995 SOUTH 900 EAST MIDVALE, UTAH 84047
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COTTONWOOD MALL
GENERAL GROWTH PROPERTIES

4835 SOUTH HIGHLAND DRIVE
HOLLADAY, UTAH
LOCATED IN THE NE 1/4 SEC 9 & NW 1/4 SEC 10, T2S, R1E, SLB & M

REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		

PROJECT NO:	260209
CAD DWG. FILE:	260209utl
DRAWN BY:	JSK / AGC
DESIGNED BY:	TJD
FIELD CREW:	SURVEYED
CHECKED BY:	TJD
DATE:	01 NOV 2007

SHEET TITLE:
COTTONWOOD MALL
OVERALL SITE
UTILITY PLAN

C5.00

Draft Date: 12/11/07

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
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SASAKI
RTKL

Environmental/Energy Efficiency Statement of Intent

General Growth Properties
Sustainability Commitment & Credentials

Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

-1983 report by the World Commission on Environment and Development, commissioned by the UN General Assembly

Our Commitment

The need to maintain a healthy environment and quality of life for future generations is one of the most important challenges of our time. This is a challenge we must all rise to meet. It is not easy – nothing this important is ever easy. It will take time.

GGP is committed to addressing this challenge through responsible use of natural resources and waste management. This commitment is aligned with our enduring corporate values. Our stakeholders expect it, our long-term success as a company depends upon it, and, it is simply the right thing to do.

As a real estate owner and developer with over 210 million square feet of property space and millions more under development, GGP has a tremendous opportunity and responsibility to facilitate change in this area. **We embrace sustainability as an intrinsic part of how we do business, in the goals we set, the decisions we make and the processes, programs and places we develop and manage.** By doing so we are improving our business and contributing to economic growth in our communities.

How will GGP fulfill this commitment?

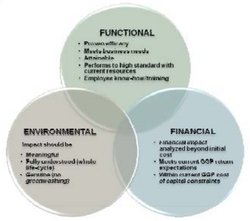
Over time we will **continuously improve** in these areas:

- Conserve **energy** short term and explore renewable energy sources long term
- Facilitate reuse and **recycling** of natural resources and synthetic materials
- Design **sites, structures and landscapes** that are resource efficient and environmentally responsible over their entire life cycle
- Conserve **water** and contribute to clean water cycles
- Practice eco-friendly **maintenance and cleaning**
- Optimize fuel efficiency of and minimize pollutants from vehicle **fleets**
- Find and use highly efficient, low-toxin **materials, supplies & equipment** that are produced and transported responsibly
- **Share** meaningful results and lessons learned

1

What are the requirements for GGP sustainability programs?

Sustainability programs must be **functionally**, **environmentally** and **financially** sound.



2

Our People

Through continuous learning and broad-based leadership, we are cultivating a culture of increasingly responsible resource utilization at GGP.

Executive Leadership
As Chairman and CEO of GGP and past president of the International Council of Shopping Centers, John Bucksbaum has made sustainability a key focus of his leadership platform, challenging our company and our industry to move forward in this important area.

Vice President, Sustainability
GGP has dedicated a position to the management of sustainability planning and improvement across the company, through collaboration with all department leaders. Lisa Loweth, Vice President Sustainability, draws on her 20 years of experience in asset management and business process improvement in the areas of operations and development at General Growth.

Cross-functional Planning & Collaboration Network
We have established an active network of six cross-functional teams to facilitate sustainability planning, knowledge sharing and genuine, meaningful progress. These teams identify and vet opportunities to assist each department head in developing and maintaining strong sustainability programs. These teams are focused on designing and developing sustainable places; operating sustainable places; sustainable workplace practices; external communication and facilitation; internal communication and education; and measurement and reporting.

3

Operating Sustainable Places

GGP is pleased and proud to be an industry leader with respect to energy efficiency and other on-going sustainable practices.

Energy Conservation & Waste Reduction
GGP is a leader in property energy conservation programs, saving the equivalent electricity to power more than 7,000 homes last year alone. Our recycling and reuse programs have diverted more than 25,000 tons from landfills annually, saving the equivalent of 440,000 mature trees, the electricity to power an additional 1,000+ homes, and over 90,000 cubic yards of landfill space. Although we are pleased with the progress we have made year after year, we embrace the challenge of continuous improvement of our conservation of resources and reduction of waste.

Exploring Emerging Green Solutions
We believe in testing and carefully evaluating new technologies, specifications and practices. Our current test and pilot programs include:

- Testing "E-Cycling" consumer electronics recycling event in four markets. This event facilitates easy community participation in doing the right thing for the environment.
- Testing hybrid security vehicles in twelve markets. Due to the way security vehicles are operated (driven slowly, frequent braking), the hybrids are constantly recharged through braking, thus operate with very little gasoline.
- Piloting waterless urinals retrofit in approximately 100 properties where building codes permit their use. This equipment is expected to conserve more than 35 million gallons of water annually. We hope to expand its use in our other operating properties as municipal codes are updated.

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Designing & Developing Sustainable Places

Energy efficient design is a standard emphasized in our developments and renovations. In addition, we are committed to continuing to expand our sustainable design expertise and experience.

In addition to integrating sustainable design fundamentals into our standard design specifications, GGP has a number of pending projects with a special focus on innovative sustainable design.

Cottonwood (Utah) – Mixed Use Community Development

A mixed-use community development near Salt Lake City, Cottonwood was selected to participate in USGBC's LEED – ND (Neighborhood Development) Pilot. Duany Plater-Zyberk and Co., renowned for developing new urbanism, created the master plan for the 57-acre project and is managing the LEED certification for the LEED ND Pilot. Cottonwood Mall will be completely reconstructed and transformed in one of the most comprehensive mall redevelopments in GGP's 53-year history. The conventional enclosed mall will be replaced with a mixed-use development of fashionable shops, residences, offices, streets conducive to strolling, riverside trails, and a public plaza that will become a community gathering place.

The new Cottonwood will include distinctive housing types including condominiums, townhouses, cottages, and single family homes. It will offer a fashionable selection of retail shopping, cafes, restaurants, a specialty grocery, cinema, and upscale office space. Parking will be accommodated on decks hidden behind attractive buildings featuring a variety of rich architectural styles. The design provides a buffer from commercial traffic with well planned small block development which transitions naturally into the surrounding neighborhood. Construction is slated to begin in late 2007, with a 2010 opening date.

The plan for the 57-acre Cottonwood property, developed for General Growth by Duany Plater-Zyberk and Co., will follow the "New Urbanist" design principles that DPZ pioneered. New Urbanism advocates walkable, human-scaled neighborhoods featuring a variety of mixed land uses. These new neighborhoods include public piazas and spaces that encourage human interaction and strengthen feelings of community. New Urbanism is seen as an antidote to urban sprawl and a way to untether local residents from their automobiles.

"The Cottonwood redevelopment will transform Cottonwood mall into a mixed-use, walkable community center featuring residences, shops and gathering spaces for the residents of the Holladay area at large," said Plater-Zyberk. "The plan emerged after careful study of the site and its surroundings, and we look forward to seeing the design vision realized. We hope this project will become a focal point for the community, as well as provide a national model for the conversion of a shopping mall into a town center."

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DPZ has designed more than 300 new and existing communities in the United States and overseas. The firm is led by its principals, Andres Duany and Elizabeth Plater-Zyberk, who are co-founders of the Congress for the New Urbanism (CNU), which has been recognized by the New York Times as "the most important collective architectural movement in the United States in the past fifty years." DPZ has received international recognition and dozens of local and national awards. Elizabeth Plater-Zyberk led the Cottonwood design team, developing the plan on site, in close collaboration with Salt Lake City and Chicago-based General Growth officials, the City of Holladay and other stakeholders.

Summerlin Centre (Nevada)

Spanning the western rim of the Las Vegas Valley and located approximately 12 miles from downtown Las Vegas, the 22,500-acre master-planned community of Summerlin offers the best of two worlds: suburban living with all the amenities that create a superior quality of life; and accessibility to world-class dining, shopping and entertainment on the Las Vegas Strip. Currently home to nearly 95,000 residents, Summerlin is comprised of hundreds of neighborhoods and dozens of villages - all connected by a 150-mile-long trail system and more than 100 parks. Summerlin is located adjacent to Red Rock Canyon National Conservation Area, the most treasured natural landmark in southern Nevada that has become a world-class rock climbing destination. With 22 public and private schools, four institutions of higher learning, nine golf courses, major health and medical centers, business parks, shopping centers, cultural facilities and more than a dozen houses of worship, Summerlin is a multi-generational and fully integrated community. Summerlin ranked as America's best-selling community for more than a decade since its inception in the early 1990s and still has more than 7,500 acres left to develop.

The most recent development in this thriving community is our 1.4 million-square-foot open air shopping mall and office tower project, Summerlin Centre. As part of this sustainable development, GGP is pursuing silver level LEED Core & Shell certification (Leadership in Energy and Environmental Design).

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Expert Planning and Design Consultants

GGP maintains collaborative partnerships with highly respected sustainable planning and design consultants.

Rocky Mountain Institute
RMI provides sustainable consulting services for GGP and is supporting the development of the Summerlin, our master-planned community in the Las Vegas area. An international leader in sustainable design, RMI works with developers, architects, facility managers, and real-estate professionals to create high-performance buildings and communities. The firm offers decades of hands-on experience in green design combined with a high level of expertise in energy and resource efficiency.

Duany Plater-Zyberk & Company
Master town planners and founders of the Congress for the New Urbanism, DPZ is providing master planning services for GGP to support the redevelopment of Cottonwood near Salt Lake City. DPZ's projects have received numerous awards, including two National AIA Awards, the Vincent Scully Prize, the Thomas Jefferson Medal and two Governor's Urban Design Awards for Excellence. New Urbanism was recognized by the New York Times as "the most important collective architectural movement in the United States in the past fifty years." New Urbanism minimizes reliance on the automobile, allowing people to live, work, shop and relax all in a walkable environment.

Torti Gallas & Partners, Inc
This architectural firm's sustainability expertise includes and emphasis on minimizing the impact of development on the earth's natural resources and on indoor environments by maximizing energy and water efficiency, minimizing storm water runoff, preserving open space and utilizing sustainable materials. Over the past five years the firm won eight "Charter Awards" by the Congress for New Urbanism. Torti Gallas' projects include town planning, transit oriented development and commercial and residential development. They are one of the consultants participating in the development of GGP's Cottonwood project.

Sasaki Associates
Sasaki is providing planning services for GGP's town center development in Columbia, Maryland, the path-breaking master planned community founded in the 1960s by Jim Rouse, as well as our pending project in Cottonwood, Utah. Sasaki played a leading role in the development of Reston Town Center and San Antonio River Walk. Since the firm's inception, ecological issues have been an inherent consideration. Hideo Sasaki believed that ecology and the environment were equally important considerations to be integrated into the entire design process. From his earliest writings as an assistant professor in the 1950s, to his teaching at Harvard University and the creation of Sasaki Associates, Hideo Sasaki applied this approach to all he did. It is this core value that continues to guide the firm today. From Sasaki's earliest work at Sea Pines Plantation in the 1950s, to the environmental policy-setting impact report for the 1960 Winter Olympic Games in Lake Placid, the creation of MIT – Sasaki's own Mobile Environmental Lab, to the latest efforts of their Sasaki Green Lab, the firm continues to be at the forefront of sustainable design initiatives.

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RTKL – Retail / Office Architects
Whether RTKL is delivering downtown infill projects or redeveloping the suburbs, they bring an enlightened urban sensibility to everything they do: Smart growth ideals, a mix of uses, authenticity, appropriate connections, scale and the public realm. These are the components of thriving, sustainable environments, no matter where they are. RTKL has worldwide expertise in mixed use development; planning and urban design.

HOK
With two decades of experience in sustainability, HOK Planning Group is committed to building a better world and leading clients toward an increasingly sustainable future. In addition to writing a comprehensive book on sustainable design, this firm helped develop the first LEED rating system and was recognized by the U.S. Green Building Council (U.S.G.B.C) in 2006 with its national Organizational Excellence Award. Innovative, environmentally responsible design projects include San Mateo County Forensic Laboratory (a LEED certified "living lab" for sustainable design incorporating sustainable energy, lighting and ventilation systems), Logan International Airport Terminal A (featuring water-efficient and energy-efficient systems, stormwater filtration and construction waste recycling), Santa Clarita Transit Facility, U.S. EPA Environmental Research Center (widely recognized model for sustainability that embodies the EPA's goals) and Winrock International Headquarters in Little Rock, Arkansas (affordable, environmentally responsible construction with innovative approach to water harvesting and energy efficiency).

Cooper, Robertson & Partners
Rather than being guided by abstract themes or a predetermined style, this architecture and design firm tailors each project to its individual surroundings and its cultural roots. No building or design component is seen as separate from its immediate landscape and overall environment. This approach naturally ensures that sustainability is an organic and fundamental aspect of all of their work. Currently providing master planning design services for GGP's Columbia, Maryland Town Center project, they have also consulted with us in the past on Summerlin, a master-planned community in the Las Vegas area.

William McDonough
A key-note speaker at General Growth's annual employee conference in 2007, Bill McDonough has continued to offer thought leadership in the area of cradle-to-cradle concepts to our design and development executives. Executing a diverse array of projects around the world, William McDonough + Partners (WM+P) is a firm of architects, planners, and leaders in sustainable design. WM+P practices a positive, principled design approach that draws inspiration from living systems and processes, and all of their designs integrate environmentally intelligent design strategies. At its heart, this unique approach celebrates the abundance of nature: daylight, fresh air, diversity, life, and creativity. William McDonough, the firm's founding partner, has played a prime role in defining sustainable design through his designs, writings, and speeches for more than two decades. Putting such concepts into practice, his firm has created pioneering architecture and community designs that consider the long-term and broad-scale consequences of design. Among the great diversity of projects completed by the firm, several are recognized as landmarks of the sustainability movement: the Environmental Defense Fund National Headquarters (1985); the Herman Miller "GreenHouse" Factory and Offices (1995); 901 Cherry, Offices for Gap Inc. (1997); the Adam Joseph Lewis Center for Environmental Studies (2000) at Oberlin College; and the revitalization of historic Ford Rouge Center.

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Please fax to (503) 813-5230
Attn: _____

ROCKY MOUNTAIN POWER

UTAH
LETTER OF INTENT

This Agreement, dated as of _____ is between:

Rocky Mountain Power
825 NE Multnomah Blvd., Suite 600
Portland, OR 97232
Attn: Energy FinAnswer/FinAnswer Express

And

Owner:

_____
_____
_____

Contact person: _____ Phone: _____

Rocky Mountain Power account #: _____

1. Energy Analysis. Rocky Mountain Power will conduct, without charge to Owner, an energy analysis, to determine potential energy savings available from the installation of Energy Efficiency Measures. (EEMs) in Owner's facility known as _____ located at _____. Rocky Mountain Power and Owner will work cooperatively and in good faith to determine the scope, content, and product of the energy analysis and to facilitate its performance. Should Rocky Mountain Power and Owner fail to reach agreement on any aspect of the energy analysis, Rocky Mountain Power, in its sole discretion, will decide such issues.

2. Owner's Approval of Energy Specialist. Rocky Mountain Power will, at Owner's request, submit to Owner for approval the names, addresses, and resumes of any outside energy specialists that Rocky Mountain Power intends to use to perform the energy analysis. The use of such persons in connection with the energy analysis will then be subject to the approval of Owner.

3. Confidential Information. In consideration for the receipt of any Confidential Information from Owner, Rocky Mountain Power agrees to keep such information strictly confidential and not to disclose it to any third party.
3.1 Confidential Information shall mean business plans of Owner or operating data related to the Owner's Facility, disclosed to Rocky Mountain Power during the course of the energy analysis or any follow-up energy analysis at the Owner's Facility, and identified by Owner in writing as confidential. Confidential information will not include information which (i) is or becomes part of the public knowledge or literature, (ii) is approved for release by the written authorization of its owner, or (iii) is rightfully disclosed by operation of law, regulation, or order by a court or governmental agency.

3.2 Rocky Mountain Power may disclose Confidential Information to energy specialists utilized to perform energy analyses at Owner's Facility. Prior to such disclosure, Rocky Mountain Power shall require that energy specialists agree in writing to be bound by these confidentiality provisions. At Owner's request, Rocky Mountain Power will provide Owner with copies of any such agreements.

3.3 Rocky Mountain Power's obligation to protect Owner's Confidential Information will remain in force for two (2) years from the date the Owner signs this Letter of Intent.

4. Cooperation by Owner. Owner agrees to have its employees or contractors cooperate with Rocky Mountain Power and its approved energy specialists and to provide Facility operating data and energy use evaluation assistance needed for Rocky Mountain Power to complete the Energy Analysis.

5. Hazardous Material Identification. Rocky Mountain Power and its energy specialists shall have no responsibility for the discovery, presence, handling, removal or disposal of or exposure of persons to hazardous materials of any kind in connection with the Facility including, but not limited to asbestos, asbestos products, PCBs, or other toxic substances.

6. Disputes/Governing Law. This Agreement shall be exclusively governed by and interpreted in accordance with the laws of the state where the Facility is located, excluding choice of law rules. Any litigation between the parties shall be prosecuted only in the state or federal courts of the state where the Facility is located.

7. Under no circumstances shall either party be liable under this Agreement for any economic losses, costs or damages, including but not limited to special, indirect, incidental, consequential, punitive, or exemplary damages. In any case, Rocky Mountain Power's liability under this Agreement shall be limited to the cost of performing the energy analysis contemplated hereunder. Rocky Mountain Power warrants that it shall perform the energy analysis in good faith. Rocky Mountain Power disclaims all other warranties.

8. Owner acknowledges that this Letter of Intent is not an incentive offer and that incentives are available only after completion of the energy analysis and through the terms and conditions of a fully executed Rocky Mountain Power Energy Efficiency Incentive Agreement signed prior to the Owner signing equipment purchase orders or making other financial commitments to implement the project.

Owner	Rocky Mountain Power
By: _____	By: _____
Title: _____	Title: _____

Draft Date: 12/11/07

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

DUANY PLATER-ZYBERK & CO. ARCHITECTS AND TOWN PLANNERS
TORTI GALLAS AND PARTNERS
McNEIL Engineering, Inc.
SB ARCHITECTS
SASAKI
RTKL

Site Construction/Environmental Quality Control Plan

R307-309-6. Fugitive Dust Control Plan.

(1) Any person owning or operating a new or existing source of fugitive dust, including storage, hauling or handling operations, or engaging in clearing or leveling of land one-quarter acre or greater in size, earthmoving, excavation, or movement of trucks or construction equipment over cleared land one-quarter acre or greater in size or access haul roads, or engaging in demolition activities including razing homes, buildings or other structures shall submit a plan to control fugitive dust to the executive secretary no later than 30 days after the source becomes subject to R307-309. The plan shall address fugitive dust control strategies for the following operations as applicable:

(a) Material Storage;
(b) Material handling and transfer;
(c) Material processing;
(d) Road ways and yard areas;
(e) Material loading and dumping;
(f) Hauling of materials;
(g) Drilling, blasting and pushing operations;
(h) Clearing and leveling;
(i) Earth moving and excavation;
(j) Exposed surfaces;
(k) Any other source of fugitive dust.
(2) Strategies to control fugitive dust may include:
(a) Wetting or watering;
(b) Chemical stabilization;
(c) Enclosing or covering operations;
(d) Planting vegetative cover;
(e) Providing synthetic cover;
(f) Wind breaks;
(g) Reducing vehicular traffic;
(h) Reducing vehicular speed;
(i) Cleaning haul trucks before leaving loading area;
(j) Limiting pushing operations to wet seasons;
(k) Paving or cleaning road ways;
(l) Covering loads;
(m) Conveyor systems;
(n) Boots on drop points;
(o) Reducing the height of drop areas;
(p) Using dust collectors;
(q) Reducing production;
(r) Mulching;
(s) Limiting the number and power of blasts;
(t) Limiting blasts to non-windy days and wet seasons;
(u) Hydro drilling;
(v) Wetting materials before processing;
(w) Using a cattle guard before entering a paved road;
(x) Washing haul trucks before leaving the loading site;
(y) Terracing;
(z) Cleaning the materials that may create fugitive dust on a public or private paved road promptly; or
(aa) Preventing, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site.
(3) Each source shall comply with all provisions of the fugitive dust control plan as approved by the executive secretary.

Groundwater Pumping Intent Statement:

Groundwater pumping with discharge to Big Cottonwood Creek has historically been utilized to protect Cottonwood Mall structure(s). Groundwater pumping will continue to be utilized to protect current and future structure(s) that penetrate the groundwater table, subject to city approval of means and methods during the building permit process.

GGP shall comply with Salt Lake Valley Noise Ordinance:

SALT LAKE VALLEY HEALTH DEPARTMENT
HEALTH REGULATIONS
#21
NOISE CONTROL
Adopted by the Salt Lake City-County
Board of Health
September 6, 1984
Amended September, 2000
Under Authority of Section 26A-1-121
Utah Code Annotated, 1953 as amended
CERTIFIED OFFICIAL COPY
SALT LAKE VALLEY HEALTH DEPARTMENT
By
Kathryn N. Vedder, M.D., M.P.H.
Executive Director
DRAFT COPY February 2001
HEALTH REGULATIONS
#21
NOISE CONTROL

In addition to compliance with Salt Lake Valley Noise Ordinance, GGP shall comply with the City of Holladay Noise Ordinance Amendment which states working hours shall only consist during the times of 8:00am to 10:00pm.

GENERAL NOTES:

SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM TEST D-1557 EXCEPT UNDER BUILDING FOUNDATION WHERE IT SHALL BE 98% MIN. OF MAXIMUM DENSITY. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED REGISTERED SOILS ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED, HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS & SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.

THE CONTRACTOR IS TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. SPECIFIC NOTES AND DETAILS SHOWN ON SHEET C6.03 SHALL BE USED IN COMBINATION WITH OTHER ACCEPTED LOCAL PRACTICES.

EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.

SILTATION AND SEDIMENT CONTROL MEASURES:

1. THE SEDIMENT BASINS SHALL BE PROVIDED AT THE LOWER END OF EVERY DRAINAGE AREA PRODUCING SEDIMENT RUNOFF. THE BASINS SHALL BE MAINTAINED AND CLEANED AFTER EVERY RUNOFF PRODUCING STORM. THE BASINS SHOULD BE SEMI-PERMANENT STRUCTURES THAT WOULD REMAIN UNTIL SOIL STABILIZING VEGETATION HAS BECOME WELL ESTABLISHED ON ALL ERODIBLE SLOPES.

2. SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE.

3. AFTER SEWER UTILITY TRENCHES ARE BACK-FILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET.

4. PROVIDE A SANDBAG SILT BASIN OR TRAP BY EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING DRAIN SYSTEM.

5. SANDBAGS AND FILL MATERIAL SHALL BE STOCKPILED AT INTERVALS, READY FOR USE WHEN REQUIRED.

6. ALL EROSION CONTROL DEVICES WITHIN THE DEVELOPMENT SHOULD BE MAINTAINED DURING AND AFTER EVERY RUNOFF PRODUCING STORM, IF POSSIBLE, MAINTENANCE CREWS WOULD BE REQUIRED TO HAVE ACCESS TO ALL AREAS.

7. ANY PROPOSED ALTERNATIVE CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY ALL RESPONSIBLE AGENCIES, I.E., CITY ENGINEER, DEPARTMENT OF FLOOD CONTROL, ETC.

EROSION CONTROL:

1. ALL BUILDING PADS TO BE DIKED AND THE DIKES MAINTAINED TO PREVENT WATER FROM FLOWING FROM THE PAD UNTIL THE STREETS AND DRIVEWAYS ARE PAVED AND WATER CAN FLOW FROM THE PADS WITHOUT CAUSING EROSION, OR CONSTRUCT DRAINAGE FACILITIES TO THE SATISFACTION OF HOLLADAY CITY THAT WILL ALLOW WATER TO DRAIN FROM THE PAD WITHOUT CAUSING EROSION.

2. TOPS OF ALL SLOPES TO BE DIKED OR TRENCHED TO PREVENT WATER FROM FLOWING OVER THE CREST OF SLOPES.

3. MANUFACTURED SLOPES AND PADS SHALL BE ROUNDED VERTICALLY AND HORIZONTALLY AS APPROPRIATE TO BLEND WITH THE SURROUNDING TOPOGRAPHY.

4. APPROVED SLOPE PROTECTION MEASURES SHALL PROCEED IMMEDIATELY BEHIND THE EXPOSURE OF CUT SLOPES AND/OR THE CREATION OF EMBANKMENT SLOPES.

5. CATCH BASINS, DE-SILTING BASINS AND STORM DRAIN SYSTEM SHALL BE INSTALLED TO THE SATISFACTION OF HOLLADAY CITY.

6. SAND BAG CHECK DAMS TO BE PLACED IN A MANNER APPROVED BY HOLLADAY CITY PUBLIC WORKS IN UNPAVED STREETS WITH GRADIENTS IN EXCESS OF 2% AND ON OR IN OTHER GRADED OR EXCAVATED AREAS AS REQUIRED BY HOLLADAY CITY.

GENERAL NOTES:

THE CONTRACTOR SHOULD RECOGNIZE THE FOLLOWING GUIDELINES:

1. CONTRACTOR TO OBTAIN AND COMPLY WITH ALL U.P.D.E.S. REQUIREMENTS FROM THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER DIVISION, (801)-538-6951.

2. CONTRACTOR SHOULD FOLLOW A SPECIFIED WORK SCHEDULE THAT COORDINATES THE TIMING OF LAND-DISTURBING ACTIVITIES. THE REMOVAL OF SURFACE GROUND COVER LEAVES A SITE VULNERABLE TO ACCELERATED EROSION.

3. LIMIT LAND CLEARING AND RESTORE PROTECTIVE COVER QUICKLY.

4. SCHEDULE PROJECTS TO DISTURB ONLY SMALL PORTIONS OF THE SITE AT ANY ONE TIME.

5. COMPLETE GRADING AS SOON AS POSSIBLE.

6. IMMEDIATELY STABILIZE THE DISTURBED PORTION BEFORE GRADING THE NEXT.

7. PRACTICE STAGED SEEDING IN ORDER TO RE-VEGETATE CUT AND FILL SLOPES AS THE WORK PROGRESSES.

8. STABILIZE OPEN TRENCHES AS SOON AS POSSIBLE.

9. SEQUENCE TRENCHING PROJECTS SO THAT MOST OPEN PORTIONS OF THE TRENCH ARE CLOSED BEFORE NEW TRENCHING IS BEGUN.

10. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND RUNOFF. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL FACILITIES SHOWN.

11. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. A REPRESENTATIVE OF HOLLADAY CITY MAY REQUIRE ADDITIONAL CONTROL DEVISES UPON INSPECTION OF PROPOSED FACILITIES.

12. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STREETS CLEAN AND FREE FROM DEBRIS DEPOSITED BY TRAFFIC FROM THE SITE.

3. CONTRACTOR SHALL USE VEHICLE TRACKING CONTROL AT ALL LOCATIONS WHERE VEHICLES WILL ENTER OR EXIT THE SITE. CONTROL FACILITIES SHALL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY, AND REMOVED WHEN THE SITE IS PAVED.

14. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM THE SITE.

15. BLOWING DUST MUST BE CONTROLLED AT ALL TIMES. INSTALLATION OF A SILT FENCE AND SITE WATERING SHALL BE USED TO CONTROL DUST. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS ABSOLUTELY PROHIBITED.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) DUE TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT.

17. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACK-FILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

18. ALL MEASURES CONTAINED IN THIS PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT. ANY NEEDED CLEANING AND REPAIRS SHALL BE DONE IMMEDIATELY UPON DISCOVERY.

19. ALL UTILITY LINES SHALL BE CLEANED OF DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE DOWNGRADE LINES MUST BE PROTECTED FROM WASH-WATER DURING THE CLEANING TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.

20. DURING THE RAINY SEASON THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED BY THE PROPERTY OWNER IN THE EVENT OF A RAINSTORM. 100% OF ALL SUPPLIES NEEDED FOR BMP MEASURES SHALL BE RETAINED ON THE JOB SITE IN A MANNER THAT ALLOWS FULL DEPLOYMENT AND COMPLETE INSTALLATION IN 48 HOURS OR LESS OF A FORECAST RAIN.

21. LIMITS OF DISTURBANCE TO BE STAKED BEFORE ANY CONSTRUCTION.

LONG TERM MAINTENANCE (POST-CONSTRUCTION):

1. EROSION CONTROL STRUCTURES BELOW SODDED AREAS MAY BE REMOVED ONCE SOD AND FINAL LANDSCAPING ARE IN PLACE. EROSION CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS ESTABLISHED A MATURE COVERING OF HEALTHY VEGETATION. EROSION CONTROL IN PROPOSED PAVEMENT AREAS SHALL REMAIN IN PLACE UNTIL PAVEMENT IS COMPLETE.

2. THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORM WATER REGULATIONS AT ALL TIMES. THE BMP'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE MAINTENANCE OF THE BMP'S IS THE RESPONSIBILITY OF THE PERMITTEE, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION BY HOLLADAY CITY OR OTHERS. IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.

3. EMPLOYEE'S OF THE FACILITY MUST BE TRAINED TO MAINTAIN THE PROPERTY SO THE STORM WATER DOES NOT COME IN CONTACT WITH ANY POLLUTANTS. THE FOLLOWING PRECAUTIONS SHALL BE PERFORMED BY THE EMPLOYEE'S:

A) PERIODIC INSPECTIONS OF THE CATCH BASIN SEDIMENT TRAPS INCLUDING CLEANING WHEN THE TRAP IS MORE THAN HALF FULL. INSPECTIONS MUST BE DONE AFTER EVERY MAJOR RAINFALL, OR ONCE EVERY 6 MONTHS AS A MINIMUM. DISPOSAL OF ANY REMOVED GREASE OR OIL MUST BE DONE IN ACCORDANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
B) LITTER, DEBRIS, AND CHEMICALS MUST BE PICKED UP OR MOVED INDOORS PRIOR TO ANTICIPATED STORM EVENTS (FORECASTED BY LOCAL WEATHER REPORTS), OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
C) PARKING AREAS MUST BE KEPT FREE FROM AUTOMOBILE FLUIDS (OIL, ANTIFREEZE, ETC.) AS TO NOT WASH INTO STORM DRAIN SYSTEM. SPILLS MAY BE SOAKED UP WITH SAWDUST OR LIKE MATERIAL AND PROPERLY DISPOSED.

Air Quality Monitoring: General Growth Properties will monitor air quality of the site during demolition and construction according to compliance with all State and Federal Regulations associated with Air Quality Control and Dust Mitigation as further described above.

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater-Zyberk & Co.
Architects and Town Planners
Torti Gallas and Partners
McNEIL Engineering, Inc.
SB Architects
SASAKI
RTKL

Geotechnical Data and Studies

Gordon Spilker Huber
Geotechnical Consultants, Inc

REPORT
EARTHWORK AND PAVEMENT
RECOMMENDATIONS
COTTONWOOD MALL
4835 SOUTH HIGHLAND DRIVE
HOLLADAY, UTAH

Submitted To:

General Growth Properties, Inc.
35 Century Park Way
Salt Lake City, Utah 84115

Submitted By:

Gordon Spilker Huber Geotechnical Consultants, Inc.
4426 South Century Drive, Suite 100
Salt Lake City, Utah 84123

October 12, 2007

Job No. 0335-004-07

Gordon Spilker Huber
Geotechnical Consultants, Inc

October 12, 2007
Job No. 0335-004-07

General Growth Properties, Inc.
35 Century Park Way
Salt Lake City, Utah 84115

Attention: Ms. Kathy Olson and Mr. Patrick Peterman

Ladies and Gentlemen:

Re: Report
Earthwork and Pavement Recommendations
Cottonwood Mall
4835 South Highland Drive
Holladay, Utah

1. INTRODUCTION

1.1 OBJECTIVES AND SCOPE

The objectives and scope of the study were planned in discussions between Mr. Patrick Peterman and Ms. Kathy Olson of General Growth Properties, Inc., and Messrs. Bill Gordon and Josh Whitney of Gordon Spilker Huber Geotechnical Consultants, Inc. (GSH).

In general, the objective of this study was to:

1. Provide initial earthwork and pavement recommendations to be utilized in the design and construction of the proposed facilities.

In accomplishing this objective, our scope has included the following:

1. An office program consisting of the correlation of available data, engineering analyses, and the preparation of this summary report.

1.2 AUTHORIZATION

Authorization was provided verbally by Mr. Patrick Peterman and Ms. Kathy Olson of General Growth Properties, Inc.

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1.3 PROFESSIONAL STATEMENTS

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered within previous exploration test pits, borings, and trenches; measured and projected groundwater conditions; and the layout traffic data discussed in Section 3., Proposed Construction, of this report. If subsurface conditions other than those described in this report are encountered and/or if layout or traffic data changes, GSH must be informed so that our recommendations can be reviewed and amended, if necessary.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

2. EXISTING CONSTRUCTION

The existing primary mall structure ranges from one-extended to three levels in height. In addition, there are one- to two-level satellite structures. All of the structures are supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural granular fill. Except for some utility tunnels, the structures do not include below-grade levels. Shortly, the structures, except for the Macy's store at the north end of the primary mall structure, will be demolished.

3. PROPOSED CONSTRUCTION

The proposed redevelopment of Cottonwood Mall will consist of 12 individual blocks. Structures will range from one to seven levels and will be of wood-frame, concrete, steel, and CMU construction. Most of the proposed structures will be established with their first level at approximate proposed final grade. A few of the structures may include one to two levels of below-grade parking. Loads associated with many of the new structures will be higher than those imposed by the existing structures.

Site development, in areas, will require site grading fills up to seven to nine feet thick. In the far eastern higher topographic portion of the site, cuts of as much as 10 to 15 feet are proposed. These soils will be used as structural site grading fill. In addition, Big Cottonwood Creek will be re-aligned, especially at the south and southwest portions of the site. Associated with the re-alignment, new bridges will be constructed.

Roadways associated with the proposed development are shown on Figure 1, Pavement Layout. Based upon projected traffic, the pavements have been divided into three categories. The categories and projected traffic, provided by Billy Hattaway of Glatting Jackson Kercher Anglin and Ted Didas of McNeil Engineering, Inc., are summarized on the following page.

Pavement Category	Lanes	Total Vehicles Per Day (Both ways, anticipated traffic once the project is complete)	Traffic Type Breakdown
Primary Roadways	Two Lanes Total (one lane each way)	10,000	89% car and light trucks 10% medium trucks 1% heavy trucks
Secondary Roadways and Service Alleys	Two Lanes Total (one lane each way)	5,000	89% car and light trucks 10% medium trucks 1% heavy trucks
Local Residential Roadways	Two Lanes Total (one lane each way)	1,000	89% car and light trucks 10% medium trucks 1% heavy trucks

It should be noted these estimated total vehicles per day do not include construction traffic. The construction traffic will include a significantly higher percentage of heavy trucks.

4. SITE CONDITIONS

4.1 SURFACE

The site is bounded by 4800 South (Murray-Holladay Boulevard) to the north. Highland Drive and Big Cottonwood Creek bound the site to the west. The site is bounded by Arbor Lane to the south. Memory Lane bounds the site to the east.

The site slopes downhill to the southwest with an overall elevation change of 40 feet across the site. A significant elevation break runs in a north/northwest-to-south/southwest direction about 100 to 200 feet east of the east side of the primary mall structure. The slope break is generally approximately 20 to 25 feet high.

Areas not occupied by structures, and except for a few landscaped islands, are paved. The existing pavement is generally in fair condition and was upgraded approximately 15 years ago. Originally, approximately one to two inches of asphalt concrete was encountered. The original pavement was structurally inadequate and failed. After the pavements were upgraded, approximately three to four inches of asphalt concrete were encountered.

4.2 SUBSURFACE SOIL

During the course of the previous studies, asphalt concrete underlain by one-half to eight feet of fills was encountered. The fills will exhibit variable and, in most cases, relatively good engineering characteristics. In general, the majority of the fills are granular in nature.

The surface pavement sections and fills are underlain by variable soils. To the west of the slope break, the soils are of alluvial origin. To the east, the soils are of lacustrine origin. West of the slope break, the subsurface soils range from silts and clays to sands and gravels. The finer-grained soils consisted primarily of silty clays/clayey silts. When stiff, these soils exhibit moderate compressibility characteristics; however, zones of soft and organic finer-grained soils will exhibit high compressibility characteristics. Most of these soils were encountered in the upper 5 to 10 feet of the subsurface sequence. The granular soils consist of sands and gravels with trace to some silt. The sands and gravels exhibit relatively low compressibility characteristics. The finer-grained zones and granular zones varied in thickness up to 10 feet thick. The clays, sands, and gravels were extremely variable on the east and south sides of the existing mall structure. The clays, sands, and gravels were somewhat variable on the west side, but in general were more granular at the surface. The clays, sands, and gravels were somewhat variable on the north side, but in general were finer-grained at the surface.

The exception to the above is the soils east of the slope break east of the mall. In general, this area has not been paved and minor fills were encountered. Silty clays were encountered that extend to depths of 40 feet. The clays will exhibit moderate compressibility characteristics.

4.3 GROUNDWATER

During the course of the previous studies, groundwater levels were measured at depths of 3.5 to 11.0 feet in portions of the site. In the higher topographic area east of the slope break, groundwater was measured at 14.0 to 37.3 feet. These groundwater levels have been measured over the last 27 years at different times throughout the years. Seasonal and longer-term groundwater fluctuations on the order of two to three feet must be anticipated with the highest levels occurring during the late spring and summer months.

5. DISCUSSIONS AND RECOMMENDATIONS

5.1 EARTHWORK

5.1.1 Site Preparation

Initial preparation of the site will consist of the demolition of the existing structures and pavements and the abandonment or relocation of existing utilities. Further preparation of the site must consist of the removal of all non-engineered fills, loose surficial soils, surface vegetation, potential deeper fills associated with previous structures, topsoil, and other deleterious materials from beneath an area extending at least three feet beyond the perimeter of the proposed buildings, pavements, and exterior flatwork. In the demolition of existing buildings, all floor slabs and foundations must be removed from proposed building areas. In proposed pavement areas, the foundations and floor slabs may remain if at least 12 inches below the new system. Floor slabs should, however, be broken up so that they do not act as water traps.

Subsequent to the above operations and prior to the placement of footings, structural site grading fill, floor slabs, or pavements, the exposed subgrade must be proofrolled by running moderate-weight rubber tire-mounted construction equipment uniformly over the surface at least three times. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be totally removed. In pavement, floor slab, and outside flatwork areas, unsuitable natural soils should be removed to a maximum depth of two feet and replaced with compacted granular structural fill.

Surface vegetation and other deleterious materials should generally be removed from the site. Topsoil if encountered, although unsuitable for utilization as structural fill, may be stockpiled for subsequent landscaping purposes. Broken-up concrete and asphalt concrete and existing non-engineered fill can be re-utilized as structural site grading fill if meeting the requirements stated in this report.

5.1.2 Temporary Excavations

Temporary construction excavations through cohesive soils, not exceeding four feet in depth, and above or below the water table may be constructed with near-vertical sideslopes. Temporary excavations up to eight feet deep in cohesive soils may be constructed with sideslopes no steeper than one-half horizontal to one vertical. Temporary excavations up to eight feet deep in granular soils above the water table may be constructed with sideslopes no steeper than one horizontal to one vertical. Excavations deeper than eight feet are not anticipated. Groundwater should be anticipated at depths of 3.5 to 37.3 feet below grade and possibly shallower. If excessive sloughing occurs or if layers of clean granular material are encountered, the sideslopes must be flattened and dewatering and/or shoring provided. Excavations below the groundwater in the granular soils will be extremely difficult due to flowing sands. To reduce disturbance, we recommend that excavation for footings be accomplished utilizing a backhoe with a smooth-lip bucket.

All excavations must be inspected periodically by qualified personnel. If any signs of instability are noted, immediate remedial action must be initiated.

5.1.3 Structural Fill

Structural fill is defined as fill that ultimately will be subjected to structural loads, such as those imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and as replacement fill below footings. Structural site grading fill is defined as fill placed over fairly large open areas to raise overall site grades.

All structural fill must be free of sod, organic material, rubbish, debris, frozen soil, and other deleterious materials. Structural fill placed below a level one foot above the groundwater table at the time of construction, or to stabilize soft or wet subgrade conditions, should consist of a mixture of clean coarse gravels and cobbles, or a mixture of one and one-half to two-inch minus gap-graded gravel.

Structural site grading fill should have a maximum particle size generally not exceeding four inches in diameter. However, occasional particles up to six to eight inches in diameter may be randomly incorporated provided that they do not result in "honeycombing" or preclude obtaining the desired degree of compaction. The maximum particle size for structural fill placed within confined areas, such as footings and utility trenches, should generally not exceed two and one-half inches. Broken-up concrete and asphalt concrete meeting the above requirements may be incorporated into structural site grading fill.

All imported granular structural fill should consist of a fairly well-graded mixture of sand and gravel containing less than 18 percent fines (percent by weight of material passing the U.S. No. 200 sieve). Imported finer-grained soils must have a plasticity index of less than 18 percent. It is projected that the on-site clays will meet this requirement. It is our understanding that significant amounts of fill soil will be brought to the site. It is our strong recommendation that the upper 12 inches of fill placed especially in pavement areas be granular. This granular fill meeting previously described parameters and having a California Bearing Ratio (CBR) value of at least 20 percent will satisfy the subbase requirement for the pavement sections recommended in Section 5.2, Pavements.

Suitable on-site natural soils and the existing non-engineered fills meeting the requirements stated above may be re-utilized as structural site grading fill. These soils, however, if fine-grained will not be suitable for use as structural fill in confined areas, such as below or around footings, adjacent to foundation walls, and within utility trenches. Only predominantly granular soils meeting the above requirements are recommended as structural fill in confined areas. It should be noted that, from a handling and compaction standpoint, fine-grained soils are very sensitive to changes in moisture content, and that very close moisture control will be required during placement and compaction. This will be very difficult, if not impossible, during wet and cold periods of the year.

Non-structural site grading fill is defined as all fill material not designated as structural fill and may consist of any cohesive or granular soils not containing excessive amounts of degradable material.

5.1.4 Fill Placement and Compaction

All structural fill placed should be placed in lifts not exceeding eight inches in loose thickness. Beneath structures and up to 10 feet thick, the fills must be compacted to at least 95 percent of the maximum dry density as determined by the AASHTO[1] T-180 (ASTM[2] D-1557) compaction criteria. Structural fills greater than 10 feet are not anticipated at the site. Structural fills less than 5 feet thick and outside the building areas but beneath outside flatwork and pavements should be compacted to at least 90 percent of the above-defined criteria. If greater than 5 feet thick, compaction should be increased to at least 92 percent.

[1] American Association of State Highway and Transportation Officials
[2] American Society for Testing and Materials

Coarse gravel and cobble mixtures, if utilized, should be end-dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, each lift of fill may be compacted by at least three passes of moderately heavy construction equipment or large self-propelled compaction equipment. To reduce the potential of long-term fines migration and associated fill subsidence, subsequent fill material placed over the coarse gravels and cobbles must be adequately "worked into" the voids of the underlying coarse fill.

Prior to the placement of structural site grading fill, pavements, floor slabs, or footings, the exposed subgrade must be prepared as discussed in Section 5.1.1, Site Preparation, of this report. In confined areas, subgrade preparation must consist of the removal of all loose or disturbed soils.

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

5.1.5 Utility Trenches

All utility trench backfill material below structurally loaded facilities (flatwork, floor slabs, roads, etc.) should be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill should be proofrolled and/or properly recompacted prior to the construction of any exterior flatwork over a backfilled trench. Proofrolling may be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proofrolling, they should be removed to a maximum depth of two feet below design finish grade and replaced with structural fill.

Most utility companies and City-County governments are now requiring that Type A-1 or A-1a (AASHTO Designation – basically granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T-180 (ASTM D-1557) method of compaction. We recommend that as the major utilities continue onto the site that these compaction specifications are followed.

The on-site fine-grained cohesive soils/fills are not recommended for use as trench backfill.

5.2 PAVEMENTS

For design, it is projected that the typical pavement subgrade will consist of silty clay and silty clay/clayey silt soils. These soils will exhibit poor pavement support characteristics when saturated or near saturated. Project traffic information was provided by Billy Hattaway of Glatting Jackson Kercher Anglin and Ted Didas of McNeil Engineering, Inc. and was discussed

in Section 3., Proposed Construction. With the subgrade soils and the projected traffic, the following pavement sections are recommended:

Primary Roadway Areas

(High Volume of Automobiles and
Moderately High Volume of Light- to Medium-Weight Trucks
and Light Volume of Heavy-Weight Trucks)
[100 equivalent 18-kip axle loads per day]

Flexible:

5.0 inches	Asphalt concrete
6.0 inches	Aggregate base course
10.0 inches	Granular subbase*
Over	Properly prepared natural soils, properly prepared existing fill, and/or structural site grading fill extending to suitable natural soils or to properly prepared existing fills

* Granular structural site grading fill exhibiting a CBR value of at least 20 percent will satisfy this requirement.

Rigid:

6.5 inches	Portland cement concrete (non-reinforced)
6.0 inches	Aggregate base course
Over	Suitable natural soils and/or structural site grading fill extending to suitable natural soils

Rigid pavements must not be established over non-engineered fill, even if properly prepared.

Secondary Roadway Areas and Service Alleys

(Moderate Volume of Automobiles and
Light- to Medium-Weight Trucks
and Light Volume of Heavy-Weight Trucks)
[40 equivalent 18-kip axle loads per day]

Flexible:

4.5 inches	Asphalt concrete
5.0 inches	Aggregate base course
10.0 inches	Granular subbase*
Over	Properly prepared natural soils, properly prepared existing fill, and/or structural site grading fill extending to suitable natural soils or to properly prepared existing fills

* Granular structural site grading fill exhibiting a CBR value of at least 20 percent will satisfy this requirement.

Rigid:

6.0 inches	Portland cement concrete (non-reinforced)
6.0 inches	Aggregate base course
Over	Suitable natural soils and/or structural site grading fill extending to suitable natural soils

Rigid pavements must not be established over non-engineered fill, even if properly prepared.

General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Il 60606
(312) 960-5000

Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

Duany Plater - Zyberk & Co.
Architects and Town Planners

Torti Gallas and Partners

McNEIL Engineering, Inc.

SB Architects

SASAKI

RTKL

Geotechnical Data and Studies

GSH Gordon Spilker Huber Geotechnical Consultants, Inc

Residential Roadway Areas

(Light Volume of Automobiles and Light- to Medium-Weight Trucks and Occasional Heavy-Weight Trucks)
[4 equivalent 18-kip axle loads per day]

Flexible:

3.0 inches	Asphalt concrete
8.0 inches	Aggregate base course
Over	Properly prepared natural soils, properly prepared existing fill, and/or structural site grading fill extending to suitable natural soils or to properly prepared existing fills

Rigid:

5.5 inches	Portland cement concrete (non-reinforced)
4.0 inches	Aggregate base course
Over	Suitable natural soils and/or structural site grading fill extending to suitable natural soils

Rigid pavements must not be established over non-engineered fill, even if properly prepared.

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Parking Areas

(Light Volume of Automobiles and Light Trucks, Occasional Medium-Weight Trucks, and No Heavy-Weight Trucks)
[1 equivalent 18-kip axle loads per day]

Flexible:

3.0 inches	Asphalt concrete
6.0 inches	Aggregate base course
10.0 inches	Granular subbase*
Over	Properly prepared natural soils, properly prepared existing fill, and/or structural site grading fill extending to suitable natural soils or to properly prepared existing fills

* Granular structural site grading fill exhibiting a CBR value of at least 20 percent will satisfy this requirement.

For dumpster pads and loading/unloading docks, we recommend a pavement section consisting of six and one-half inches of Portland cement concrete, four inches of aggregate base course, over properly prepared natural subgrade or site grading structural fills.

These rigid pavement sections are for non-reinforced Portland cement concrete. Construction of the rigid pavement should be in sections 10 to 12 feet in width with construction or expansion joints or one-quarter depth saw-cuts on no more than 12-foot centers. Saw-cuts must be completed within 24 hours of the "initial set" of the concrete and should be performed under the direction of the concrete paving contractor. The concrete should have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent ±1 percent air-entrainment. The rigid pavement sections are for non-reinforced Portland cement concrete. Concrete should be designed in accordance with the American Concrete Institute (ACI) and joint details should conform with the Portland Cement Association (PCA) guidelines. The rigid concrete should have a minimum working stress of 500 pounds per square inch. Additionally, the asphalt concrete should have a minimum elastic modulus of 360,000 pounds per square inch.

GSH Gordon Spilker Huber Geotechnical Consultants, Inc

We appreciate the opportunity of providing this service for you. If you have any questions or require additional information, please do not hesitate to contact us.

Respectfully submitted,

GSH Geotechnical Consultants, Inc. Reviewed by:

Joshua M. Whitney, State of Utah No. 6252902 Professional Engineer
JMW/WJG:sm

William J. Gordon, State of Utah No. 146417 Professional Engineer

Encl. Figure 1, Pavement Layout

Addressee (6 + email)
c: Mr. Patrick Peterman (1 + email)
General Growth Properties, Inc.
110 North Wacker Drive
Chicago, Illinois 60606

Mr. Ted Didas (1 + email)
McNeil Engineering
6895 South 900 East
Salt Lake City, Utah 84047

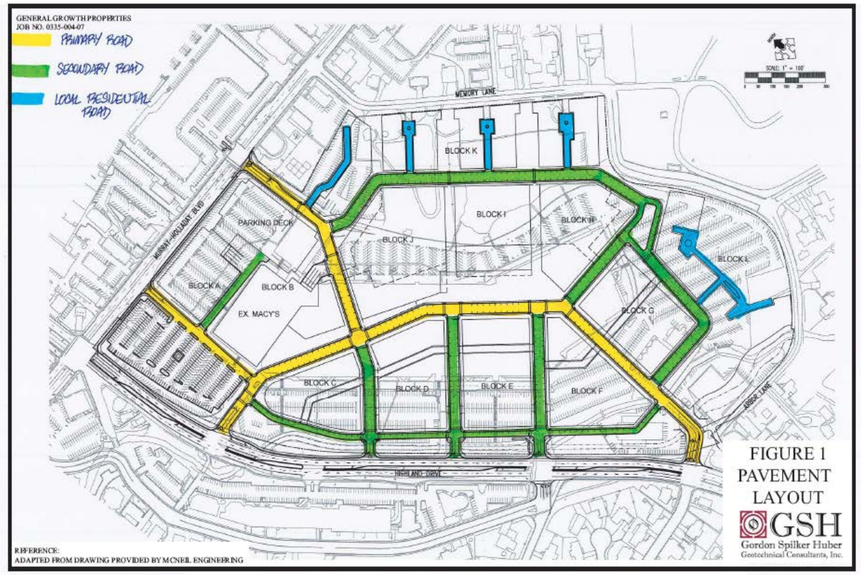

FIGURE 1
PAVEMENT LAYOUT
GSH Gordon Spilker Huber Geotechnical Consultants, Inc.

GSH Gordon Spilker Huber Geotechnical Consultants, Inc.

1. INTRODUCTION

1.1 GENERAL

This report presents the results of our detailed fault study performed across the overall Cottonwood Mall site which is located on the southeast corner of Highland Drive and Murray-Holladay Road in Holladay, Utah. The general location of the site with regard to major topographic features and existing facilities, as of 1998, is presented on Figure 1, Vicinity Map.

1.2 OBJECTIVES AND SCOPE

The objectives and scope of our study were planned in discussions between representatives of General Growth Properties, Inc., and Mr. Bill Gordon of Gordon Spilker Huber Geotechnical Consultants, Inc. (GSH).

In general, the objectives of this study were to:

1. Determine whether the faults associated with the East Bench subsection of the Wasatch Fault zone, do in, fact pass through the site.
2. If present, accurately define the locations and alignments of the faults and development appropriate fault zone setbacks.

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In accomplishing these objectives, our scope has included the following:

1. An initial office program consisting of the review of available pertinent literature of any faulting in the area and the results of an initial fault study evaluation of the eastern portion of the site which is summarized in a report dated April 28, 1986[1].
2. The excavation, logging, and sampling of five trenches.
3. A final office program consisting of the correlation of available data and the preparation of this summary report.

3. FIELD PROGRAM

Prior to the initiation of trenching, available data was reviewed for the primary purpose of developing the preferred best locations for trenching. Trenching was initiated on August 1, 2006 and completed on August 8, 2006 and consisted of 5 trenches ranging in length from 138 to 611 feet and to maximum depths of 5.0 to 7.5 feet. The five trenches are identified as Trench 1, Trench 2, Trench 3, Trench 4, and Trench 5 are shown on Figure 2, Site Plan and Air Photo.

1 "Report, Preliminary Geotechnical and Geoseismic Investigation, Proposed Retail and Parking Structures, East Side of Central Portion of Existing Cottonwood Mall Facility, Salt Lake City, Utah," Dames & Moor Job No. 8992-034-47.

GSH Gordon Spilker Huber Geotechnical Consultants, Inc.

All trenches were logged by Mr. Bill Black of Western GeoLogic, LLC. Western GeoLogic's detailed report summarizing these field activities including logs of the fault trench and conclusions are summarized in the attached report dated August 19, 2006[2].

4. SUMMARY

The exploration trenches as referenced, encountered no evidence of active faulting. Therefore, we project that the hazard from surface faulting rupture will be very low.

Trench 2 exposed undeformed lacustrine settlements from Lake Bonneville overlying a subaqueous landslide that occurred after Lake Bonneville transgressed from the site. This condition in no way should affect the overall geotechnical or geoseismic setting of the site.

We appreciate the opportunity of providing this service for you. If you have any questions or require additional information, please do not hesitate to contact us.

Respectfully submitted,

Gordon Spilker Huber Geotechnical Consultants, Inc.

William J. Gordon, State of Utah No. 146417
Professional Engineer

WJG:sm

Encl. Figure 1, Vicinity Map
Figure 2, Site Plan/Air Photo
August 19, 2006 Report

Addressee (6)
c: Mr. Ted Didas (1)
McNeil Engineering
6895 South 900 East
Salt Lake City, Utah 84047

2 "Surface Fault Rupture Hazard Evaluation, Cottonwood Mall Due Diligence, Holladay, Utah," Western GeoLogic, LLC.

WESTERN GEOLOGIC, LLC
74 NORTH N STREET
SALT LAKE CITY, UTAH 84103 USA
Phone: 801.359.7222 Fax: 801.359.2730 Email: craig_nelson@western-geologic.com

August 19, 2006

Mr. Bill Gordon, P.E.
GSH Geotechnical Consultants, Inc.
4426 South Century Drive, Suite 100
Salt Lake City, Utah 84123

SUBJECT: Surface Fault Rupture Hazard Evaluation
Cottonwood Mall Due Diligence
Holladay, Salt Lake County, Utah

Dear Mr. Gordon:

This report presents results of a surface fault rupture hazard evaluation conducted by Western GeoLogic, LLC (Western GeoLogic) for the proposed redevelopment of the Cottonwood Mall located at the southeast corner of Highland Drive and Murray Holladay Road in Holladay, Utah (Figure 1 – Project Location). The site is along the floodplain of Big Cottonwood Creek in the northeastern part of Salt Lake Valley in NE¼ Section 9 and NW¼ Section 10, Township 2 South, Range 1 East (Salt Lake Base Line and Meridian). Elevation of the site is about 4,365 feet above sea level.

PURPOSE AND SCOPE

The purpose of this investigation was to evaluate the hazard from surface faulting at the site. Other geologic hazards possibly present at the site were not evaluated and are beyond the scope of this study. The following scope of services was performed in accordance with the above purpose:

- Excavation and logging of five exploratory trenches in the Surface Fault Rupture Special Study Zone on Salt Lake County hazard maps to identify the presence and location of any active faults at the site, assess the zone of fault-related deformation, and recommend appropriate fault set-back distances and safe "buildable" areas should faults be discovered;
- Review of available geologic maps and reports; and
- Evaluation of available data and preparation of this report, which presents the results of our study.

CONCLUSIONS AND RECOMMENDATIONS

The site is south of the mapped end of the East Bench fault in a step-over zone with the Cottonwood section, which comprise the central and southern parts of the active Salt Lake City segment of the Wasatch fault zone. Geology of the site is comprised of deep-water sediments from Lake Bonneville to the east overlain by younger stream alluvium along Big Cottonwood Creek to the west. No faults are mapped crossing the property, although the site is in the Surface Fault Rupture Special Study Zone on Salt Lake County Planning Division maps. Five trenches were excavated at the site to evaluate the hazard from surface faulting. Trench 1 exposed undeformed lacustrine sediments from Lake Bonneville, which were also exposed in trench 2 and overlie a subaqueous landslide that occurred after Lake Bonneville transgressed across the site. Trenches 3 through 5 all exposed post-Lake Bonneville stream alluvium associated with Big Cottonwood Creek, which likely downcut and eroded the upper part of the lacustrine sequence. Fill from decades of urbanized development was also observed at the surface in all five trenches, generally thickening westward. No evidence for faulting was exposed in the trenches at the site, or in two borings from a previous investigation conducted in 1986, which exposed sediments below our trenched depth. Given all of the above evidence, the existing hazard from surface faulting appears low at the site.

Based on the information observed at the site and the geologic characterizations in this report, the site appears suitable for conceptual approval of the proposed development. The hazard from surface fault rupture is expected to be low at the site. A site-specific geotechnical investigation is recommended to provide design-level recommendations for cut and fill, site grading, footing and foundation design, and drainage during the construction phase of the project.

Availability of Report
The report should be made available to architects, building contractors, and in the event of a future property sale, real estate agents and potential buyers. This report should be referenced for information on technical data only as interpreted from observations and not as a warranty of conditions throughout the site.

Excavation Backfill Considerations
The trenches may be in areas where structures could subsequently be placed. However, backfill may not have been replaced in the trenches in compacted layers. The fill could settle with time and upon saturation. Should structures be located in a trenched area, no footings or structure should be founded over the trench excavation unless the backfill has been removed and replaced with structural fill, if the fill is to support a structure.

Prior to approval of each building permit(s) a site-specific geotechnical report, including liquefaction analysis and foundation design recommendation must be submitted for review.

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Cottonwood
Site Development Master Plan - Regional Mixed-Use Development
City of Holladay, County of Salt Lake, State of Utah

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