



**PLANNING COMMISSION
MEETING AGENDA
SPECIAL/STUDY MEETING**

500 W. Big Beaver
Troy, MI 48084
(248) 524-3364
www.troymi.gov
planning@troymi.gov

Michael W. Hutson, Chair, and Mark Maxwell, Vice Chair
Donald Edmunds, Tom Krent, Philip Sanzica, Robert M. Schultz
Thomas Strat, John J. Tagle, and Lon M. Ullmann

July 26, 2011

7:30 P.M.

Council Board Room

1. ROLL CALL
2. APPROVAL OF AGENDA
3. MINUTES – July 12, 2011 Regular Meeting
4. PUBLIC COMMENT – For Items Not on the Agenda
5. ZONING BOARD OF ZONING (ZBA) REPORT
6. DOWNTOWN DEVELOPMENT AUTHORITY (DDA) REPORT
7. PLANNING AND ZONING REPORT

SPECIAL USE REQUEST

8. PUBLIC HEARING – SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW
(File Number SU 117 D) – Proposed St. Mark Coptic Orthodox Church Expansion Sunday School Classes, West Side of Livernois, South of Wattles (3603 Livernois), Section 21, Currently Zoned R-1B (One Family Residential) District

SITE PLAN REVIEW

9. PRELIMINARY SITE PLAN APPROVAL (SP 970) – Proposed Granite City Food & Brewery Restaurant, South side of Big Beaver Road, East of Troy Center Drive, Section 28, Currently Zoned BB (Big Beaver Form Based Code) District

STUDY ITEM

10. SUSTAINABLE DEVELOPMENT CHECKLIST – Discuss Revised Document

OTHER ITEMS

11. PUBLIC COMMENT – Items on Current Agenda
12. PLANNING COMMISSION COMMENT

ADJOURN

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

Chair Hutson called the Regular Meeting of the Troy City Planning Commission to order at 7:30 p.m. on July 12, 2011 in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:

Donald Edmunds
Michael W. Hutson
Tom Krent
Mark Maxwell
Robert Schultz
Thomas Strat
John J. Tagle
Lon M. Ullmann

Absent:

Philip Sanzica

Also Present:

R. Brent Savidant, Acting Planning Director
Allan Motzny, Assistant City Attorney
Zachary Branigan, Carlisle/Wortman Associates, Inc.
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2011-07-041

Moved by: Schultz
Seconded by: Edmunds

RESOLVED, To approve the Agenda as prepared.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

3. APPROVAL OF MINUTES

Mr. Maxwell requested that the PowerPoint presentation on Public Libraries is attached and made a part of the original minutes.

Resolution # PC-2011-07-042

Moved by: Edmunds
Seconded by: Krent

RESOLVED, To approve the minutes of the June 28, 2011 Special/Study meeting as revised.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

SPECIAL USE REQUEST

5. PUBLIC HEARING – SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW (File Number SU 188 A) – Proposed First Romanian Baptist Church Building Addition, East Side of John R, North of Big Beaver (3244 John R), Section 24, Currently Zoned R-1D (One Family Residential) District

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

Resolution # PC-2011-07-043

Moved by: Schultz
Seconded by: Edmunds

RESOLVED, The Planning Commission hereby approves a reduction in the number of required parking spaces for the proposed First Romanian Baptist Church Building Addition, to 98 when a total of 129 spaces are required on the site based on off-street parking space requirements. This 31-space reduction is justified provided the worship facility and social hall are used exclusively of one another at all times.

BE IT FURTHER RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the proposed First Romanian Baptist Church Building Addition, located on the east side of John R Road, north of Big Beaver, at 3244 John R, Section 24, within the R-1D zoning district, be granted, subject to the following:

1. Add a sidewalk and safe pedestrian crossing between John R and the main entrance of the building.
2. Add a bicycle rack accommodating a minimum of two (2) bicycles.
3. Provide large deciduous trees every 30 feet along the east property line.
4. Eliminate one (1) additional parking space in the event that adding a sidewalk necessitates that.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

STUDY ITEM

- 6. POTENTIAL REZONING AND PRELIMINARY SITE PLAN REVISION (File Number SP 924) – Briggs Park Condominium, East Side of Rochester, North Side of Lamb, Section 14, Currently Zoned RT (One Family Attached Residential), EP (Environmental Protection) and R-1C (One Family Residential) Districts, Potential Rezoning to R-1 E (One Family Residential)

OTHER BUSINESS

- 7. SUSTAINABLE DEVELOPMENT PROCESS
- 8. PUBLIC COMMENTS – Items on Current Agenda
There was no one present who wished to speak.
- 9. PLANNING COMMISSION COMMENTS
There was general Planning Commission discussion.

The Regular Meeting of the Planning Commission adjourned at 8:40 p.m.

Respectfully submitted,

Michael W. Hutson, Chair

Kathy L. Czarnecki, Recording Secretary

DATE: July 19, 2011

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING – SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW (File Number SU 117 D) – Proposed St. Mark Coptic Orthodox Church Expansion Sunday School Classes, West Side of Livernois, South of Wattles (3603 Livernois), Section 21, Currently Zoned R-1B (One Family Residential) District

The applicant, St. Mark Coptic Orthodox Church, proposes two temporary trailers to accommodate their Sunday School classes. The church continues to raise money for a permanent building expansion.

The attached report prepared by Carlisle/Wortman Associates, Inc. summarizes the project.

Please be prepared to discuss the application at the July 26, 2011 Planning Commission Regular meeting.

Attachments:

1. Maps.
2. Report prepared by CWA.

cc: Applicant
File/ SU 117 D

G:\SPECIAL USE\SU 117 D St Mark Coptic Orthodox Church Sec 21\SU-117D St Marks Coptic 07 26 2011.docx

SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW

PUBLIC HEARING – SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW
(File Number SU 117 D) – Proposed St. Mark Coptic Orthodox Church Expansion Sunday School Classes, West Side of Livernois, South of Wattles (3603 Livernois), Section 21, Currently Zoned R-1B (One Family Residential) District

Proposed Resolution # PC-2011-07-

Moved by:

Seconded by:

RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the proposed St. Mark Coptic Orthodox Church Expansion Sunday School Classes, West Side of Livernois, South of Wattles (3603 Livernois), Section 21, within the R-1B (One Family Residential) District, be granted, subject to the following:

_____) or

(denied, for the following reasons: _____) or

(postponed, for the following reasons: _____)

Yes:

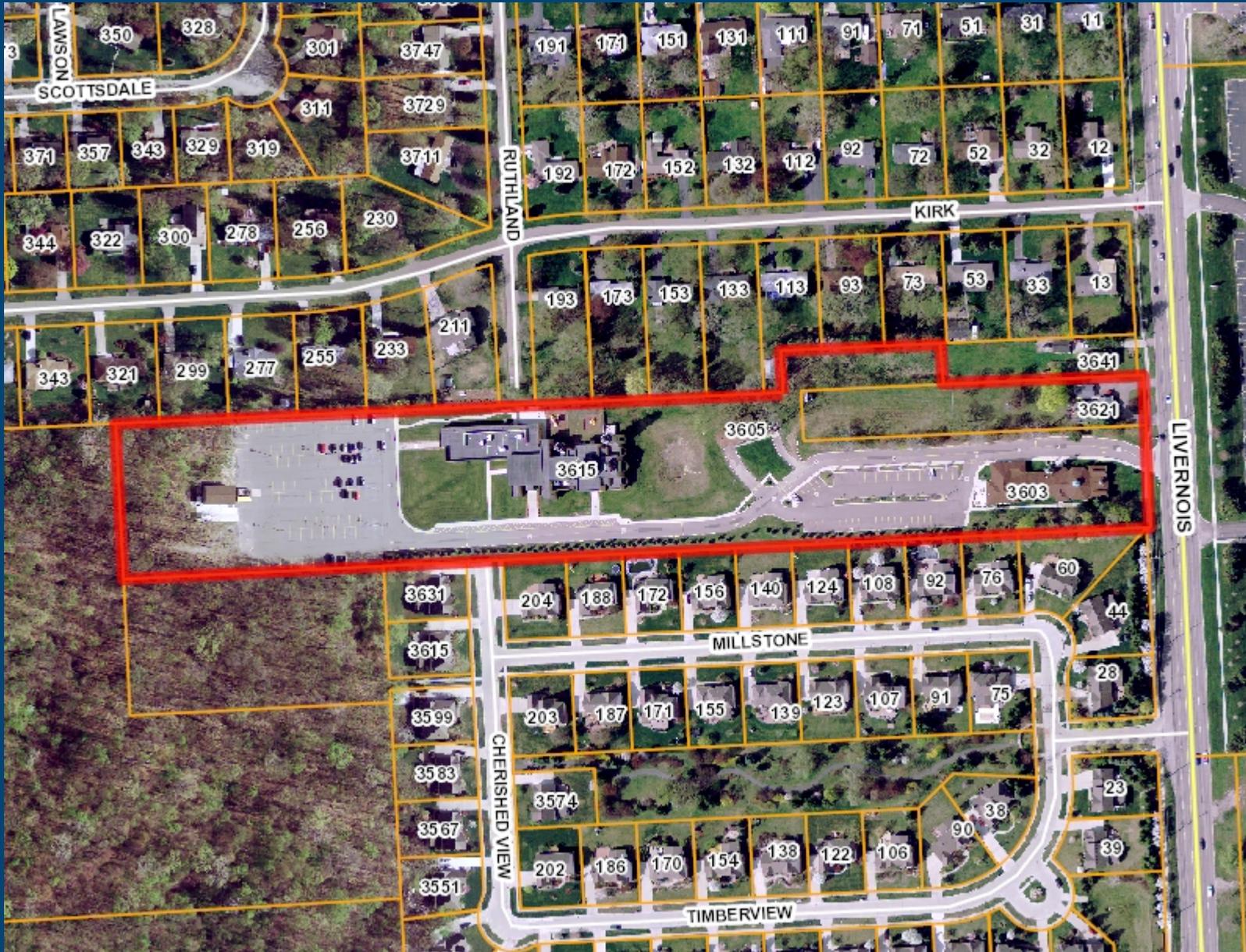
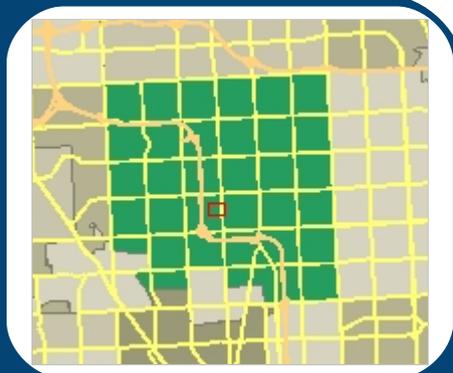
No:

Absent:

MOTION CARRIED / DENIED

St. Mark's Coptic Orthodox Church

City of Troy Planning Department



Legend

-  I-75
-  Road Centerline
 -  Major Road
 -  Industrial Road
 -  Local Road
-  Ponds and Basins
-  Streams and Creeks
-  Parcels
- Aerial Photos - 2010**
 -  Red:Band_1
 -  Green:Band_2
 -  Blue:Band_3

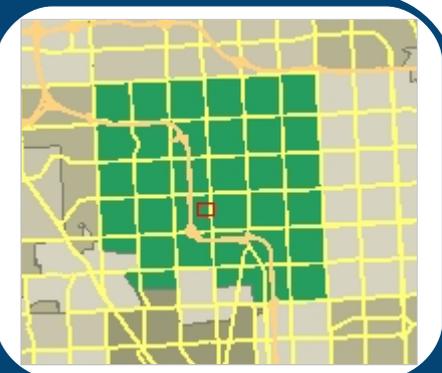
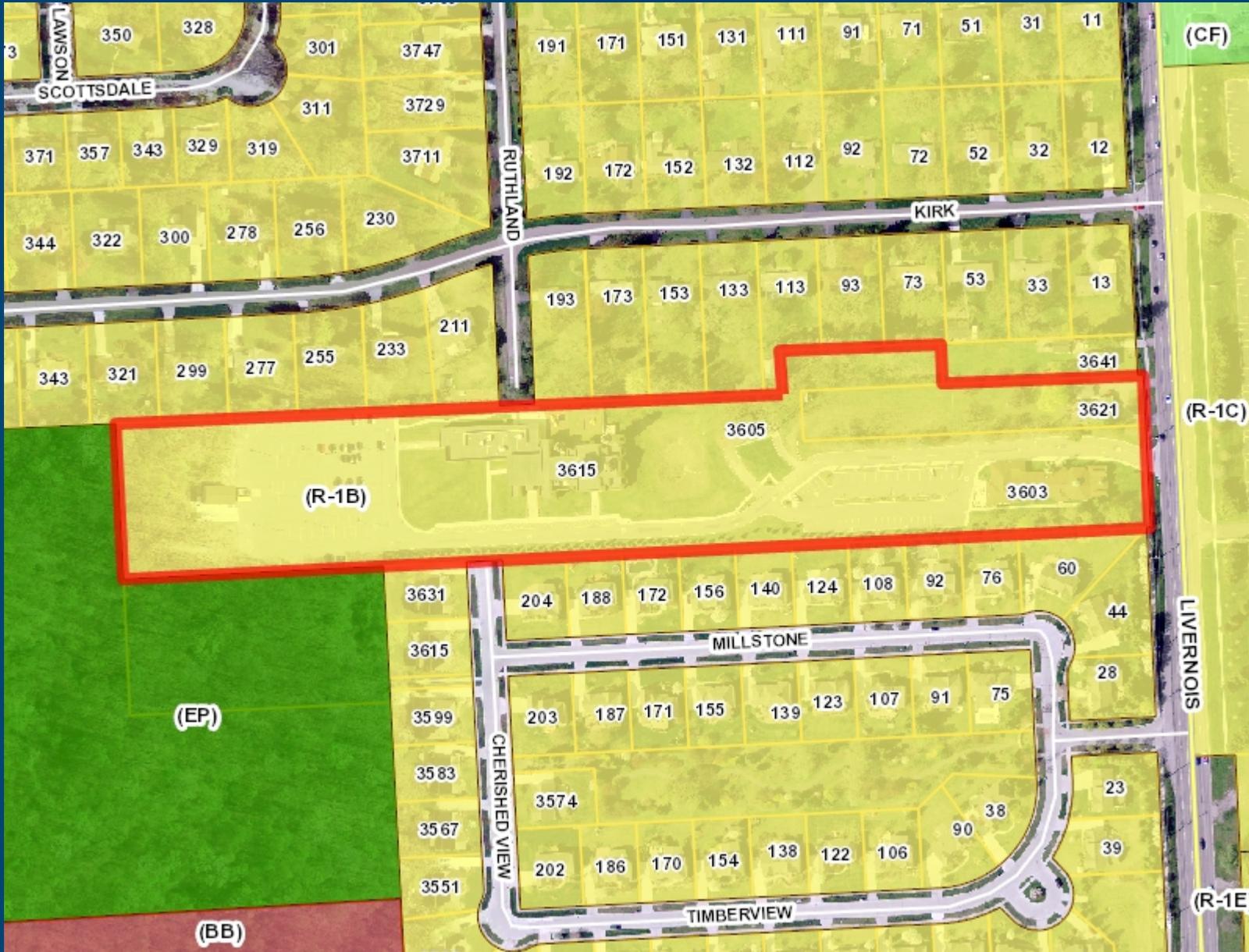
500 0 250 500Feet

Scale 1: 3,000



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 7/20/2011



Legend

- I-75
- Road Centerline
 - Major Road
 - Industrial Road
 - Local Road
- Form Based Zoning (Current)
 - (PUD) Planned Unit Development
 - (CF) Community Facilities District
 - (EP) Environmental Protection District
 - (BB) Big Beaver Road (Form Based)
 - (MRF) Maple Road (Form Based)
 - (NN) Neighborhood Nodes (A-U)
 - (CB) Community Business
 - (GB) General Business
 - (IB) Integrated Industrial Business District
 - (O) Office Building District
 - (OM) Office Mixed Use
 - (P) Vehicular Parking District
 - (R-1A) One Family Residential District
 - (R-1B) One Family Residential District
 - (R-1C) One Family Residential District
 - (R-1D) One Family Residential District
 - (R-1E) One Family Residential District
 - (RT) One Family Attached Residential District
 - (MR) Multi-Family Residential
 - (MHP) Manufactured Housing
 - (UR) Urban Residential
 - (RC) Research Center District
 - (PV) Planned Vehicle Sales
- Ponds and Basins
- Streams and Creeks
- Parcels
- Aerial Photos - 2010
 - Red:Band_1
 - Green:Band_2
 - Blue:Band_3

500 0 250 500Feet

Scale 1: 3,000



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 7/20/2011



CARLISLE/WORTMAN ASSOCIATES, INC.

Community Planners /Landscape Architects

605 S. Main, Suite 1
Ann Arbor, MI 48104
734-662-2200
fax 734-662-1935

6401 Citation Drive, Suite E
Clarkston, MI 48346
248-625-8480
fax 248-625-8455

MEMORANDUM

TO: Brent Savidant
FROM: Zachary Branigan
DATE: July 20, 2011
RE: St. Mark's Coptic Church

We are in receipt of a submittal for the addition of two trailers to the existing St. Mark's Coptic Church facility. Given the limited nature of the project, we are providing a more focused review in a memorandum format. This project is unique in that the proposed structures are semi-permanent, and could be considered temporary structures under certain circumstances, although by the applicant's own assertion, there is an expectation that they may be required for several years while additional funds are raised to complete the long-term building plan for the Church facility. It is important to note that staff has a limited time to advertise for a public hearing following a submittal for special use review, and must do so in advance of a complete review from our office. This application is clearly deficient in terms of its clarity and completeness, and is therefore not ripe for approval at this time. However, given the limited timetable, a public hearing was scheduled and can be held, but it is our opinion that the application must be significantly improved before the Planning Commission should consider action.

The St. Mark's Coptic Church has been granted a series of approvals for a new Church and for expanded on-site amenities over the years. Since the original approval of the new Church itself, there has been a plan to expand the facility in a second phase, which would also trigger the construction of a landbanked parking area at the west end of the property. This second phase has been consistently shown on all approved plans for the Church. Given economic challenges, the congregation has been unable to raise sufficient funds to construct the second phase. While the second phase has been conceived since the original approval of the main new Church, site plan approval would be required to move forward.

In our conversations with the applicant, it is our understanding that the existing space in the main building is not sufficient to accommodate the Sunday school population. Ultimately, the final phase of construction would provide a long-term home for the Sunday school attendees. To address this temporary condition, the applicant approached the City to discuss the possibility of placing two 60-foot by 13.75-foot trailers on the site in the vicinity of the planned final phase. The trailers would be permanently moored to a foundation, and would require building department approval. Given that the Church is a special use and that the trailers were not

originally conceived at the time of the original approval, and understanding that the trailers could be required for an extended period, City staff elected not to review the trailers as temporary structures. The applicant is also proposing to landscaping improvements in conjunction with the trailer placement.

The trailers themselves would qualify as buildings in the Zoning Ordinance, and their nature as pre-manufactured structures should not influence the process for review and approval, given that they will be permanently mounted to a foundation that will be constructed as part of this project. We have reviewed the plan in very general terms, given the lack of information, with regard to site design, potential landscaping, area, bulk, and height requirements, and the special use provisions of the Ordinance. As noted above, the plan is wanting in terms of completeness and clarity. We acknowledge that, due to the limited scope of the project, the Zoning Administrator may ultimately waive several site plan submittal requirements for this project.

The trailers are located in an area set aside for the construction of the final Church phase. This open area is currently grass and essentially flat, unused space. The trailers would be located side-by-side, with a shared concrete walkway going to an existing door on the Church's south side.

Site design

The proposed location of the trailers is in an area where a building has been conceived since the original approval of the main new Church structure. The area is open space with turfgrass. The project would add approximately 2,000 square feet of impervious area. It is not clear what the existing site's lot coverage or open space calculations total, so we cannot make a formal determination in this regard. However, the site is significant in area and we also understand the adjacent residential property to the north has been purchased and is now part of the overall property. The trailers appear to be situated along an existing sidewalk extending south from the building which we observed during our site visit and on aerial photographs, but which is not reflected on the site plans. We have no objection to the location of the trailers, and no additional alterations to other site design elements are proposed.

Landscaping

The submitted materials include a variety of different potential approaches to landscaping that have been proposed at various points from 1999 until present day. None of these drawings appear to reflect the as-built conditions on the site, although one set of plans was provided that does include a current revision date, although the content of the plan is largely left unrevised. It is our understanding from conversations with the applicant, and from this newly dated drawing, that they intend to install landscape screening to obscure the potential view of the trailers from the south. It is unclear if the other drawings provided reflect any proposed changes or if they are simply being used to show the trailer location. For instance, a drawing from April of 1999 shows a row of screening trees along the north side of the existing driveway, but these trees are again shown as "proposed" on a plan from 2000, and they were never planted and do not exist today. It is unclear if the applicant intends to plant those trees at this time. A current, new landscape plan

based on as-built conditions will be required to show specifically what is proposed for this project.

Area, bulk, and height requirements

We can confirm that the location of the trailers would meet minimum requirements for setbacks at this location, but we cannot provide detailed analysis of the proposed setbacks in the absence of more formal drawings. Also, we cannot confirm that the project meets height requirements, lot coverage requirements, or any other element of the area, bulk, and height standards of the Ordinance.

Special use provisions

We will provide a more formal analysis of how the project stands with regard to special use review upon the submission of a more complete submittal. However, given the limited nature and scope of the project, and assuming that the applicant does provide some landscape screening and that the project meets the minimum requirements for lot coverage and other area, bulk and height provisions, we anticipate that the addition would not impact public services, and could be compatible with the existing project and surrounding area. We reserve the right to make additional comments in this regard.

Recommendation

We do not necessarily object to the placement of the two semi-permanent buildings for the purpose of bridging the gap between the current available facilities and the final phase. The buildings would be permanently mounted on a foundation and would be required to secure building department approval. Their nature as pre-manufactured units does not necessarily impact their appropriateness from a zoning perspective. However, these buildings were not conceived at the time of the original approval and therefore represent a new proposal that required a revised special use permit for the Church.

Given this fact, a complete application meeting the minimum requirements of Section 8.05 (with any submittal requirement adjustments made by the Zoning Administrator). At a minimum, this revised submittal must show the specific limits of construction, the elevations and floor plans of the proposed structures, proposed materials, have full site details as required in Section 8.05, and provide detailed, updated information on as-built conditions and proposed landscape improvements to be made as part of this specific project. As it stands, the submitted sheets are taken from several former proposals with dates as far back as 1999. Current, newly dated drawings with the information listed above must be provided to give the Planning Commission a clear and accurate description of the existing conditions and the specific elements of the proposed project.

Therefore, we recommend the Planning Commission postpone action on the applicant's request until such time as a complete application is provided to the City.

Please do not hesitate to contact us with any questions, comments, or concerns.

St. Mark's Church
July 20, 2011

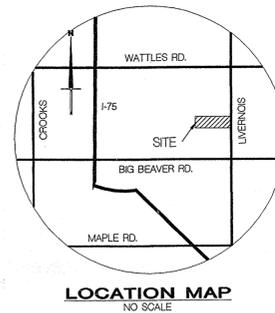
Sincerely,

A handwritten signature in black ink, appearing to read "Zachary Branigan", written over a horizontal line.

CARLISLE/WORTMAN ASSOCIATES, INC.
Zachary G. Branigan, LEED AP, AICP
Associate

225-02-1115

Submitted For Tree
Preservation Plan Approval
12/23/97
Revision One
4/9/99
Revision Two
5/22/06
Revision Three
6/29/06

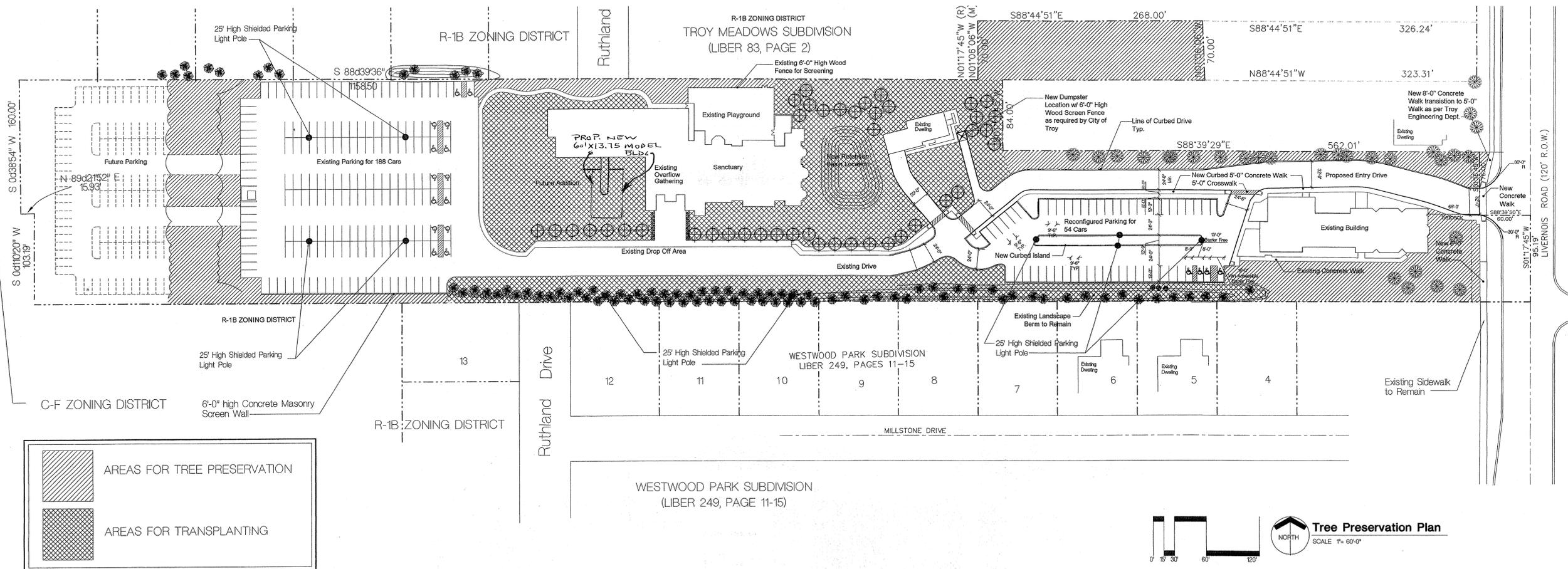


GENERAL NOTES

- 1) The location of all underground utilities not apparent on this surface are shown as per utility & governmental agency records.
- 2) All proposed buildings to be served with public water and sewer.
- 3) Topography of this site is based on data retrieved prior to 6/10/97.

Constantine
George
Pappas
A.I.A.

Architecture /
Planning
560 Kirtz Boulevard
Suite 116
Troy, Michigan 48064
(248) 244-8998



Project
**St. Mark
Coptic Orthodox Church
Troy, Michigan**

Drawn/Checked
J.L.B.
C.G.P.
Approved
C.G.P.
Date
April 9, 1999
Issued for Building
Permit, City of Troy
April 26, 1999

Sheet Title

**Tree Preservation
Plan**

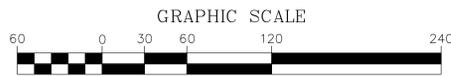
Project No.

97003

Sheet No.

TP1





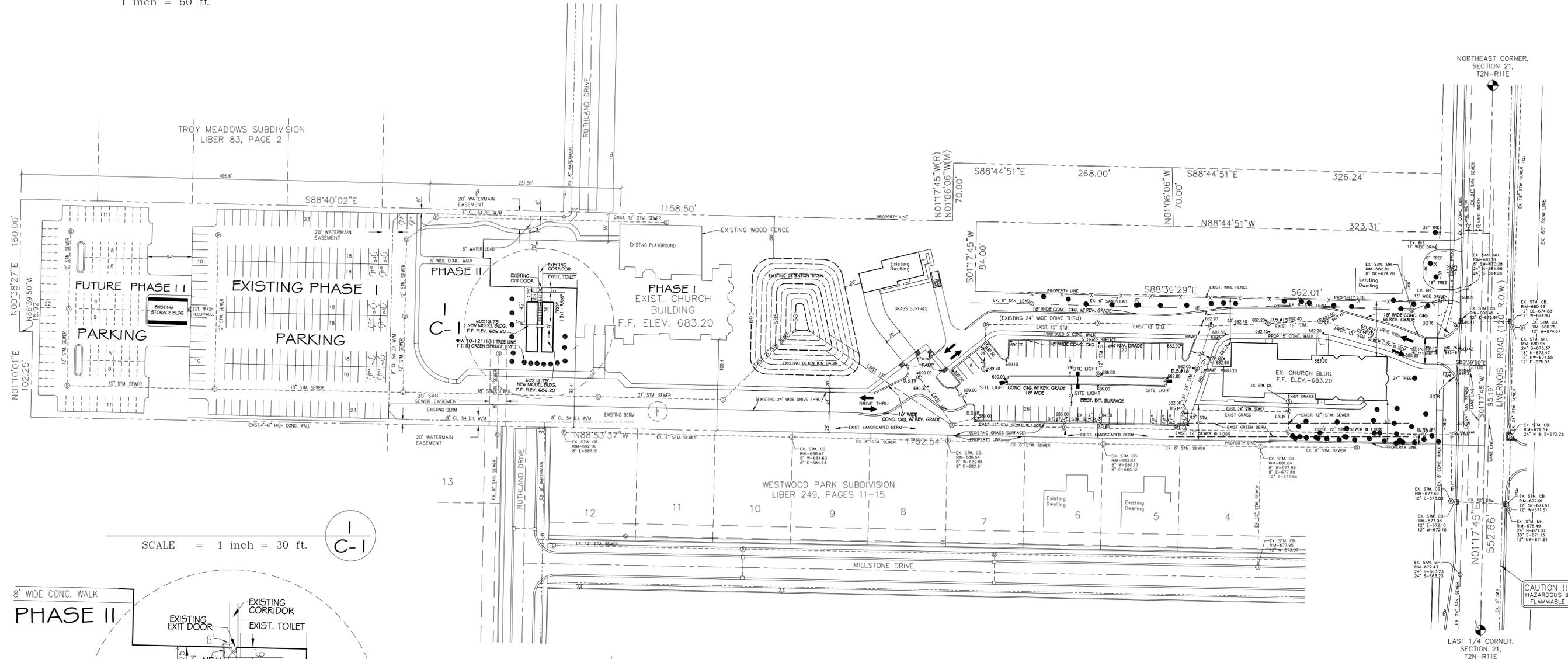
(IN FEET)
1 inch = 60 ft.

LEGEND

- (S)--- EXISTING SANITARY SEWER & MANHOLE
- (D)--- EXISTING STORM SEWER & MANHOLE
- (H)--- EXISTING FIRE HYDRANT
- (V)--- EXISTING WATER GATEVALVE
- (W)--- EXISTING WATERMAIN
- (L)--- EXISTING LIGHT POLES
- (P)--- EXISTING POWERPOLE & POWERLINES
- (C)--- EXISTING CONTOUR
- (S)--- PROPOSED SANITARY SEWER
- (D)--- PROPOSED STORM SEWER
- (W)--- PROPOSED WATERMAIN

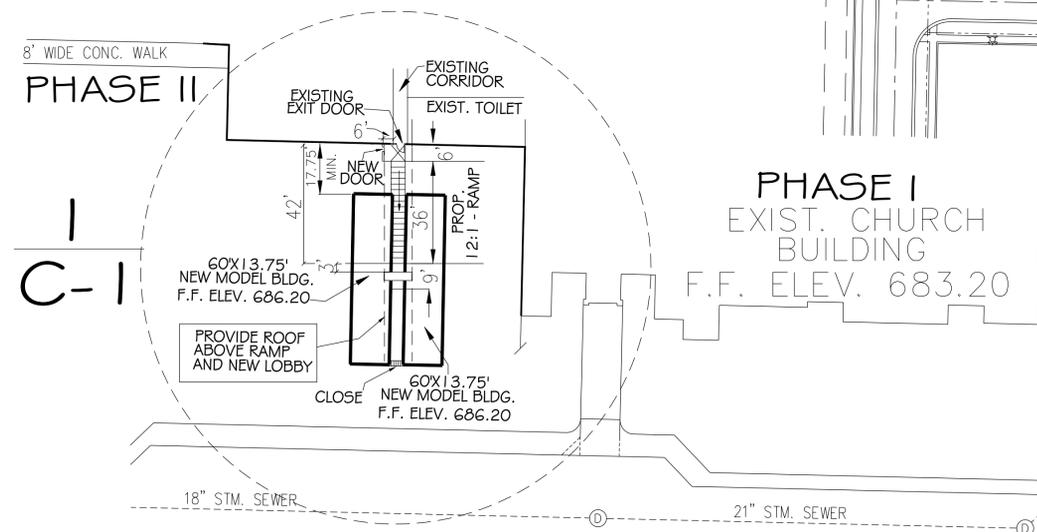
ST. MARK COPTIC ORTHODOX CHURCH OVERALL PROPOSED SITE PLAN

NEW ADDITION - MODEL BUILDING 07-11-2011



SCALE = 1 inch = 30 ft.

1
C-1

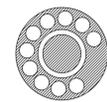


LEGAL DESCRIPTION:

PART OF THE NORTHEAST 1/4 OF SECTION 21, T2N-R11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 21; THENCE NORTH 01°17'45" EAST, 552.66 FEET (PREVIOUSLY RECORDED 552.61 FEET) ALONG THE EAST LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING; THENCE NORTH 88°53'37" WEST, 1762.54 FEET (PREVIOUSLY RECORDED NORTH 89°29'00" WEST, 1763.80 & NORTH 88°53'30" WEST 1763.07 FEET) ALONG THE NORTH LINE OF "WESTWOOD PARK SUBDIVISION" AS RECORDED IN LIBER 249, PAGES 11-15, OAKLAND COUNTY RECORDS; THENCE NORTH 01°17'45" EAST, 102.25 FEET (PREVIOUSLY RECORDED NORTH 00°16'00" EAST, 103.19 FEET); THENCE NORTH 88°39'50" WEST 15.92 FEET; THENCE NORTH 00°38'27" EAST (PREVIOUSLY RECORDED NORTH 00°10'30" WEST) 160.00 FEET TO THE SOUTH LINE OF "TROY MEADOWS SUBDIVISION" AS RECORDED IN LIBER 83, PAGE 2, OAKLAND COUNTY RECORDS; THENCE SOUTH 88°40'02" EAST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST & SOUTH 88°39'50" EAST) 1158.50 FEET ALONG THE SOUTH LINE OF SAID "TROY MEADOWS SUBDIVISION"; THENCE SOUTH 01°17'45" WEST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST) 84.00 FEET; THENCE SOUTH 88°39'50" EAST, 562.01 FEET (PREVIOUSLY RECORDED SOUTH 88°20'00" EAST, 562.00 FEET); THENCE SOUTH 01°17'45" WEST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST) 76.00 FEET; THENCE SOUTH 88°39'50" EAST (PREVIOUSLY RECORDED SOUTH 89°20'00" EAST) 60.00 FEET TO THE EAST LINE OF SAID SECTION 21; THENCE SOUTH 01°17'45" WEST 95.19 FEET ALONG THE EAST LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING, ALSO INCLUDING ALL THAT PART OF THE WEST 648 FEET OF THE NORTH 70 FEET OF THE SOUTH 2015 FEET OF THE NORTHEAST 1/4 OF SECTION 21, T. 2 N., R. 11 E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 21; THENCE S 01° 17'45" W, 2016.25 FEET ALONG THE EAST SECTION LINE; THENCE N 88° 44'51" W, 383.26 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N 88° 44' 51" W, 268.00 FEET TO THE EAST LINE OF LOT 46, "TROY MEADOWS SUB." (L. 83, P. 2, O.C.R.); THENCE N 01° 06' 06" E., 70.00 FEET ALONG SAID EAST LINE; THENCE S 88° 44' 51" E, 268.00 FEET ALONG THE SOUTH LINE OF "TROY MEADOWS SUB."; THENCE S 01° 06' 06" W, 70.00 FEET TO THE POINT OF BEGINNING. ALL OF THE ABOVE CONTAINING 9.66 ACRES. ALL OF THE ABOVE BEING SUBJECT TO THE RIGHTS OF THE PUBLIC IN LIVERNOIS ROAD. ALL OF THE ABOVE BEING SUBJECT TO EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD.

NOTE:
THE CONTRACTOR SHALL PLACE BENCHMARKS THROUGHOUT THE SITE AS DIRECTED BY ENGINEER.

BENCHMARK
FINISHED FLOOR OF EXISTING CHURCH ELEVATION-683.20 (NGVD DATUM)



3 WORKING DAYS (72 HOURS)
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
(TOLL-FREE) FOR THE LOCATION OF UNDERGROUND FACILITIES

CAUTION !!!
HAZARDOUS &
FLAMMABLE

DEVELOPER: ST. MARK COPTIC ORTHODOX CHURCH
3603 LIVERNOIS, TROY, MICHIGAN 48083-5033
(248) 528-1241

MICHIGAN PROFESSIONAL ENGINEERING, P.C.
ENGINEERS, ARCHITECTS & SURVEYORS
2721 CHICAGO BLVD., FLINT, MICHIGAN 48503
PHONE: (810)814-4722-FAX: (810)238-7070

design by:
S. MIKHAIL

date:
02-10-2009

job number:
98000

approved by:
S. MIKHAIL

REVISIONS
07-11-2011

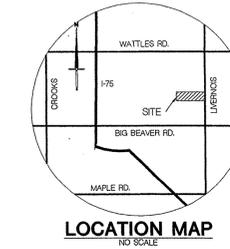
SHEET NO:

C-1

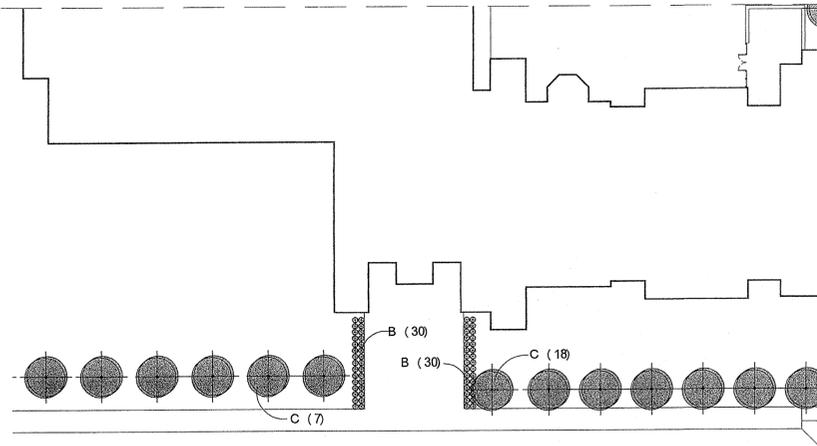
Landscape Data

Mark	Quantity	Size	Description
A	10	6'-0" HGT.	Arborvitae
B	66	18" to 24" B + B	Yew
C	32	2 1/2" to 3" Caliper	Bradford Pear
D	12	2 1/2" to 3" Caliper	Ash
E	28	36" B + B	Spirea
F	94	10' to 12' HGT.	Green Spruce

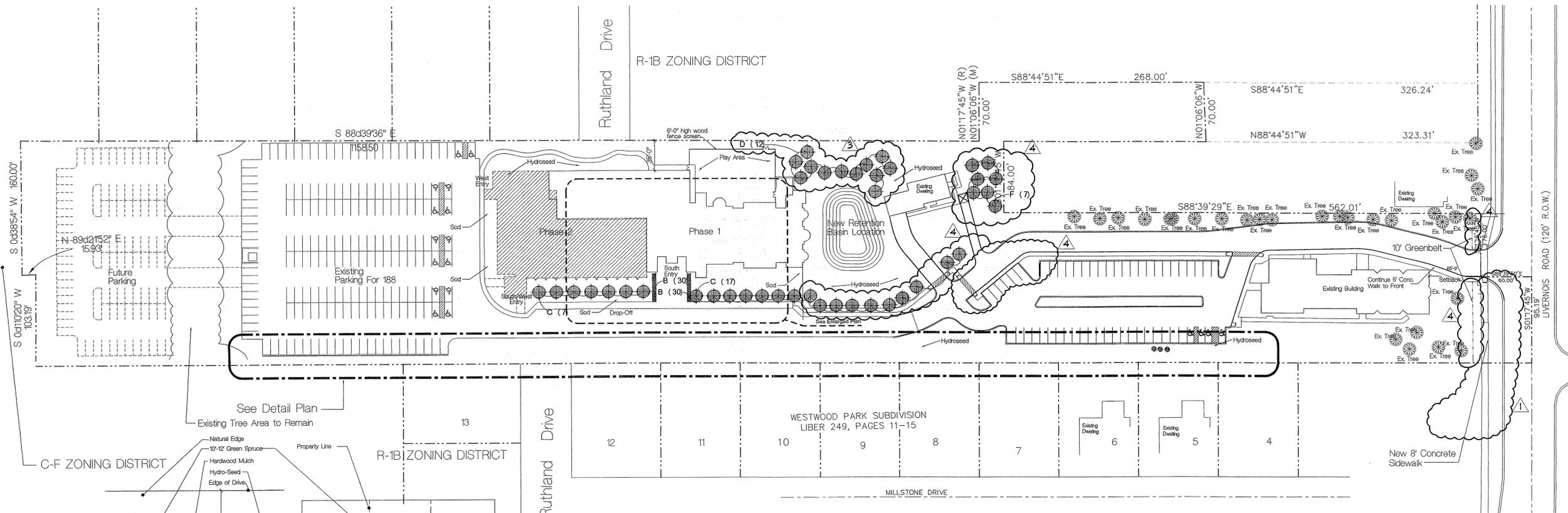
NOTE: Provide irrigation for all plant materials.



- Issued for
Landscape Approval
City of Troy
May 3, 2000
- 1 Revised per City of Troy
June 15, 2000
 - 2 Revised
July 11, 2003
 - 3 Revised
May 22, 2006
 - 4 Revised
June 29, 2006



**ENLARGED
LANDSCAPE PLAN**
SCALE 1" = 30'-0"



**Constantine
George
Pappas
A I A**

**Architecture /
Planning**
560 Kirtz Boulevard
Suite 116
Troy, Michigan 48064
(248) 244-8998

Project

**St. Mark
Coptic Orthodox Church
Troy, Michigan**

Drawn/Checked
J.L.B. C.G.P.
Approved
C.G.P.
Date
May 1, 2000

LANDSCAPE PLAN
SCALE 1" = 60'-0"

Sheet Title

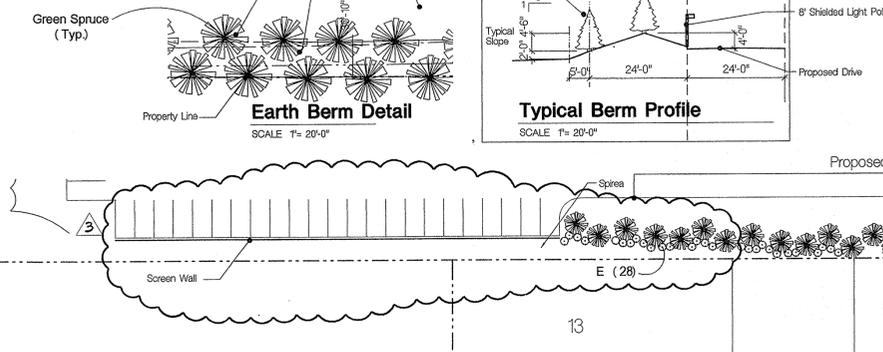
Landscape Plan

Project No.

97003

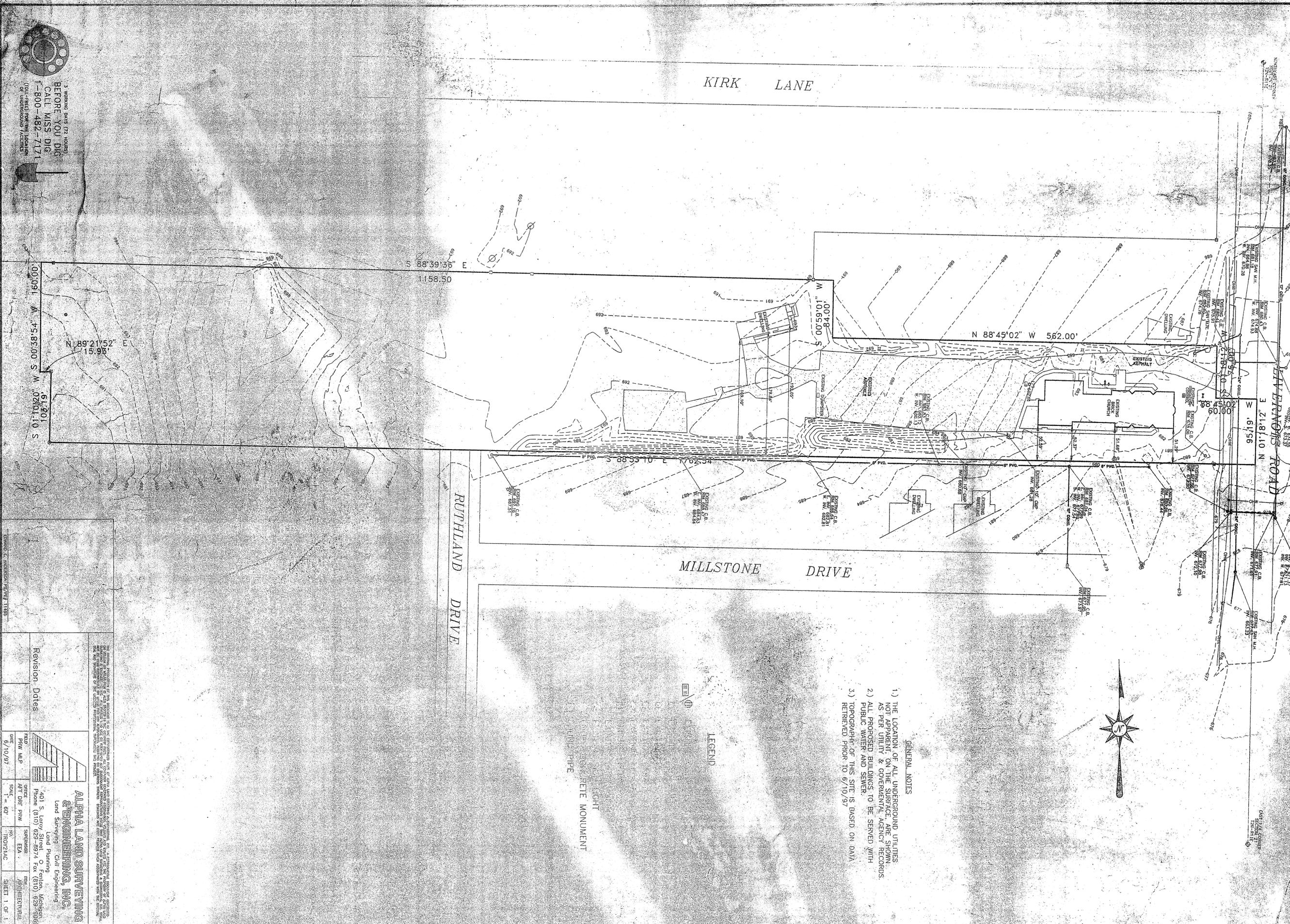
Sheet No.

L1



**DETAIL
LANDSCAPE PLAN**
SCALE 1" = 40'-0"

**ARCHITECTURAL SURVEY FOR:
ST. MARX COPTIC ORTHODOX CHURCH
3603 LIVERNOIS ROAD
TROY MI, 48063-5033**



- GENERAL NOTES**
- 1.) THE LOCATION OF ALL UNDERGROUND UTILITIES NOT APPARENT, ON THE SURFACE ARE SHOWN AS PER UTILITY & GOVERNMENT AGENCY RECORDS.
 - 2.) ALL PROPOSED BUILDINGS TO BE SERVED WITH PUBLIC WATER AND SEWER.
 - 3.) TOPOGRAPHY OF THIS SITE IS BASED ON DATA RETRIEVED PRIOR TO 6/10/97

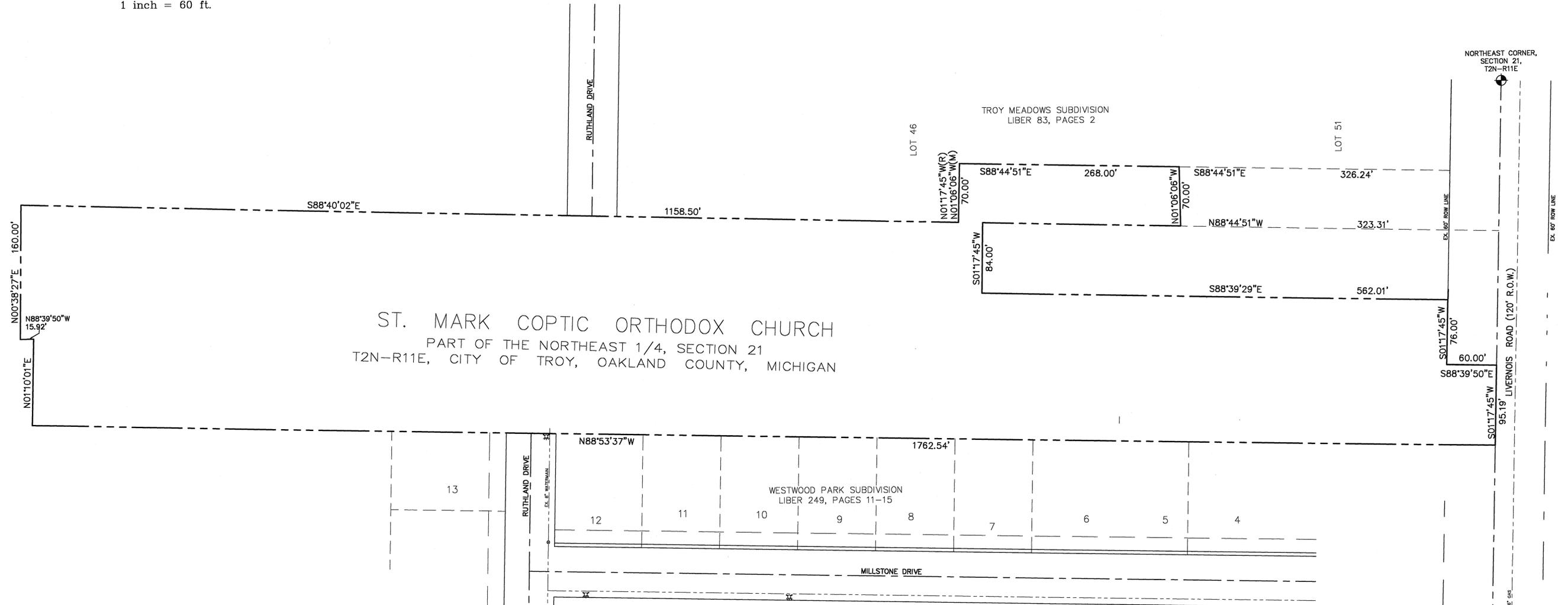
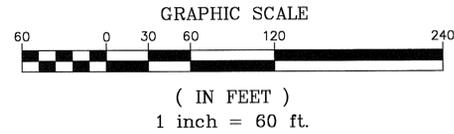


<p>ALPHA LAND SURVEYING & ENGINEERING, INC. Land Surveying, Civil Engineering Land Planning</p> <p>401 S. Long Street, Troy, Michigan Phone: (313) 629-8974 Fax: (313) 629-8966</p>		<p>DATE: 6/10/97</p> <p>SCALE: 1" = 60'</p> <p>TITLE: ARCHITECTURAL</p>
<p>REVISION: DATES</p> <p>DATE: 6/10/97</p>	<p>BY: [Signature]</p> <p>CHK: [Signature]</p>	<p>SHEET 1 OF 1</p>



BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
(Or) 313-629-8974

ST. MARK COPTIC ORTHODOX CHURCH PROPERTY DRAWING & LEGAL DESCRIPTION



ST. MARK COPTIC ORTHODOX CHURCH
PART OF THE NORTHEAST 1/4, SECTION 21
T2N-R11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

PART OF THE NORTHEAST 1/4 OF SECTION 21, T2N-R11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 21; THENCE NORTH 01°17'45" EAST, 552.86 FEET (PREVIOUSLY RECORDED 552.61 FEET) ALONG THE EAST LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING; THENCE NORTH 88°53'37" WEST, 1762.54 FEET (PREVIOUSLY RECORDED NORTH 89°29'00" WEST, 1763.80 & NORTH 88°53'30" WEST 1763.07 FEET) ALONG THE NORTH LINE OF "WESTWOOD PARK SUBDIVISION" AS RECORDED IN LIBER 249, PAGES 11-15, OAKLAND COUNTY RECORDS; THENCE NORTH 01°10'01" EAST 102.25 FEET (PREVIOUSLY RECORDED NORTH 00°16'00" EAST, 103.19 FEET); THENCE NORTH 88°39'50" WEST 15.92 FEET; THENCE NORTH 00°38'27" EAST (PREVIOUSLY RECORDED NORTH 00°01'30" WEST) 160.00 FEET TO THE SOUTH LINE OF "TROY MEADOWS SUBDIVISION" AS RECORDED IN LIBER 83, PAGE 2, OAKLAND COUNTY RECORDS; THENCE SOUTH 88°40'02" EAST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST & SOUTH 88°39'50" EAST) 1158.50 FEET ALONG THE SOUTH LINE OF SAID "TROY MEADOWS SUBDIVISION"; THENCE SOUTH 01°17'45" WEST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST) 84.00 FEET; THENCE SOUTH 88°39'29" EAST, 562.01 FEET (PREVIOUSLY RECORDED SOUTH 88°20'00" EAST, 562.00 FEET); THENCE SOUTH 01°17'45" WEST (PREVIOUSLY RECORDED SOUTH 00°21'00" EAST) 76.00 FEET; THENCE SOUTH 88°39'50" EAST (PREVIOUSLY RECORDED SOUTH 89°20'00" EAST) 60.00 FEET TO THE EAST LINE OF SAID SECTION 21; THENCE SOUTH 01°17'45" WEST 95.19 FEET ALONG THE EAST LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING, ALSO INCLUDING ALL THAT PART OF THE WEST 648 FEET OF THE NORTH 70 FEET OF THE SOUTH 2015 FEET OF THE NORTHEAST 1/4 OF SECTION 21, T. 2 N., R. 11 E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 21; THENCE S 01°17'45"W, 2016.25 FEET ALONG THE EAST SECTION LINE; THENCE N 88°44'51" W, 383.26 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N 88°44'51" W, 268.00 FEET TO THE EAST LINE OF LOT 46, "TROY MEADOWS SUB.", (L. 83, P. 2, O.C.R.), THENCE N 01°06'06" E., 70.00 FEET ALONG SAID EAST LINE; THENCE S 88°44'51" E, 268.00 FEET ALONG THE SOUTH LINE OF "TROY MEADOWS SUB."; THENCE S 01°06'06" W, 70.00 FEET TO THE POINT OF BEGINNING. ALL OF THE ABOVE CONTAINING 9.66 ACRES, ALL OF THE ABOVE BEING SUBJECT TO THE RIGHTS OF THE PUBLIC IN LIVERNOIS ROAD, ALL OF THE ABOVE BEING SUBJECT TO EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD.



DEVELOPER: ST. MARK COPTIC ORTHODOX CHURCH
3603 LIVERNOIS, TROY, MICHIGAN 48063-5033
(248) 528-1241



design by:
S. MIKHAIL
date:
05-08-2006

job number:
98000

approved by:
S. MIKHAIL

REVISIONS

SHEET NO:
C-2

DATE: July 19, 2011

TO: Planning Commission

FROM: R. Brent Savidant, Acting Planning Director

SUBJECT: PRELIMINARY SITE PLAN APPROVAL (SP-970) – Proposed Granite City Food & Brewery Restaurant, South side of Big Beaver Road, East of Troy Center Drive, Section 28, Zoned BB (Big Beaver Form Based Code) District

The petitioner, PEA Inc., submitted the above referenced Preliminary Site Plan Approval application for a new Granite City Restaurant & Brewery. The site is currently an underutilized parking lot. This is the first Preliminary Site Plan application under the new Big Beaver Form Based Zoning District.

Granite City Restaurant & Brewery received Special Use Approval and Preliminary Site Plan Approval from the Planning Commission on June 10, 2008. They received administrative Final Site Plan Approval on September 22, 2008. However, construction was never started.

The attached report prepared by Carlisle/Wortman Associates, Inc. summarizes the application.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Supplement to Parking Analysis, dated June 30, 2011
4. Shared Parking Analysis, dated June 4, 2008

cc: Applicant
File/ SP 970

G:\SITE PLANS\SP 970 Granite City Food and Brewery Sec 28\SP-970 Granite City 07 26 11.docx

PROPOSED RESOLUTION

Resolution # PC-2011-07-

Moved by:

Seconded by:

RESOLVED, The Planning Commission hereby approves a reduction in the total number of required parking spaces for the proposed Granite City Food & Brewery to 142 when a total of 149 spaces are required on the site based on the off-street parking space requirements for restaurants. This 7-space reduction meets the standards of Section 13.06; and,

BE IT FURTHER RESOLVED, The Planning Commission hereby approves a reduction in the total number of required parking spaces for the entire PNC office building parent site, including the tower, annex and proposed restaurant, to 1,607, when a total of 2,122 spaces are required on the site based on the off-street parking space requirements for office, medical office, restaurant and retail uses. This 515 space reduction meets the standards of Section 13.06.

BE IT FINALLY RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 5 of the Zoning Ordinance, as requested for the proposed Granite City Food & Brewery Restaurant, located on the south side of Big Beaver Road, east of Troy Center Drive, in Section 28, within the BB (Big Beaver Form Based) zoning district, is hereby granted, subject to the following conditions:

1. Correct the east boundary labels and setback lines to reflect its condition as a side yard.
2. Demonstrate that the first floor is 14 feet or taller in height.
3. Relocate the proposed 30 inch wall and hedgerow so that the hedgerow is on the north side of the wall, along the required building line.
4. Add a bike rack with capacity of at least two bicycles.
5. Add one street tree.
6. Show the location of existing cross access easements on abutting properties and the location of proposed cross access or joint drive easements on the subject property.
7. Provide full dimensions on the preliminary floor plans.
8. Provide a lighting plan indicating proposed photometrics, height of light fixtures, proposed light fixtures, and proposed methods of shielding, prior to Final Site Plan Approval.

Yes:

No:

MOTION CARRIED/FAILED



Legend

-  I-75
- Road Centerline**
 -  Major Road
 -  Industrial Road
 -  Local Road
-  Ponds and Basins
-  Streams and Creeks
-  Parcels
- Aerial Photos - 2010**
 -  Red:Band_1
 -  Green:Band_2
 -  Blue:Band_3

415 0 208 415Feet

Scale 1: 2,490



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 7/19/2011



Legend

-  I-75
-  Road Centerline
 -  Major Road
 -  Industrial Road
 -  Local Road
- Form Based Zoning (Current)**
 -  (PUD) Planned Unit Development
 -  (CF) Community Facilities District
 -  (EP) Environmental Protection District
 -  (BB) Big Beaver Road (Form Based)
 -  (MRF) Maple Road (Form Based)
 -  (NN) Neighborhood Nodes (A-U)
 -  (CB) Community Business
 -  (GB) General Business
 -  (IB) Integrated Industrial Business District
 -  (O) Office Building District
 -  (OM) Office Mixed Use
 -  (P) Vehicular Parking District
 -  (R-1A) One Family Residential District
 -  (R-1B) One Family Residential District
 -  (R-1C) One Family Residential District
 -  (R-1D) One Family Residential District
 -  (R-1E) One Family Residential District
 -  (RT) One Family Attached Residential District
 -  (MR) Multi-Family Residential
 -  (MHP) Manufactured Housing
 -  (UR) Urban Residential
 -  (RC) Research Center District
 -  (PV) Planned Vehicle Sales
-  Ponds and Basins
-  Streams and Creeks
-  Parcels
- Aerial Photos - 2010**
 -  Red:Band_1
 -  Green:Band_2
 -  Blue:Band_3

415 0 208 415Feet

Scale 1: 2,490



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 7/19/2011



CARLISLE/WORTMAN ASSOCIATES, INC.
Community Planners /Landscape Architects

605 S. Main, Suite 1
Ann Arbor, MI 48104
734-662-2200
fax 734-662-1935

6401 Citation Drive, Suite E
Clarkston, MI 48346
248-625-8480
fax 248-625-8455

Date: July 19, 2011

Preliminary Site Plan Review For City of Troy, Michigan



Applicant: James Butler, PE
Project Name: Granite City Food and Brewery
Plan Date: June 15, 2011
Location: South side of Big Beaver Road, between I-75 and Troy Center Drive
Zoning: BB, Big Beaver District
Action Requested: Preliminary Site Plan Approval
Required Information: Deficiencies noted

PROJECT AND SITE DESCRIPTION

We are in receipt of a preliminary site plan which includes a site plan, landscape plan, topographic survey, tree preservation plan, grading and utility plan, site details, floor plans, and elevations. The site plan submittal provides sufficient information for a preliminary review.

The applicant intends to gain approval for a new outlet restaurant in an existing parking area of the PNC Center. This development would eliminate a series of existing parking spaces at the north end of the property along Big Beaver Road and replace them with a new building, revised parking areas, and new landscaping and pedestrian amenities. A similar proposal was previously approved by the Planning Commission, but that plan has since expired. In the meantime, the new Troy Zoning Ordinance was adopted, changing the underlying zoning of this parcel to BB District, a form-based code district within the community. Consequently, the applicant was required to submit a new revised plan conforming to the new form-based requirements. This

adjustment was easily made, given that the approved but expired plan largely complied with many of the form-based requirements. Alterations from the expired plan to the current submittal include moving the building closer to the road, the addition of a larger outdoor café area, new elevations and floor plans, increased landscaping, and a revised site configuration.

The proposed use is a microbrewery and restaurant. Restaurants are a principal permitted use in the BB District when the site is a “Site Type A” and is located on a “Street Type A,” as is the case with this parcel.

Location of Subject Property:

The property is located on the south side of Big Beaver Road, between I-75 and Troy Center Drive, in a new outlot of the PNC Center.

Size of Subject Property:

The parcel is 1.93 acres in area.

Proposed Uses of Subject Parcel:

The applicant proposes to use the site for a microbrewery and restaurant.

Current Use of Subject Property:

The subject property is currently a parking area of the PNC Center.

Current Zoning:

The property is currently zoned BB, Big Beaver District.

Zoning Classification of Adjacent Parcels and Current Land Use:

North: BB, Big Beaver District; vacant and office
South: BB, Big Beaver District; office
East: BB, Big Beaver District; Interstate 75
West: BB, Big Beaver District; office, bank

BUILDING LOCATION AND SITE ARRANGEMENT

The proposed building would be located at the north end of the property and would be accessed via cross access with the existing bank and office complex on the south and west sides. The building is situated so as to comply with the form-based code provisions of the BB District. The building includes a large outdoor dining area along Big Beaver Road and two significant pedestrian connections to the Big Beaver Road sidewalks. We have no objection to the proposed building location and site arrangement.

Items to be Addressed: *None.*

AREA, WIDTH, HEIGHT, SETBACKS

Required and Provided Dimensions:

Table 5.03.B.1 establishes the requirements for a project using Building Form A provisions. Building Form A is permitted by right in the BB District when the site is a “Site Type A” and is located on a “Street Type A,” as is the case with this parcel. The requirements and the proposed dimensions are as follows:

	<u>Required:</u>	<u>Provided:</u>
Front (Big Beaver Road)	10 foot required building line	10 feet*
Rear (south)	30 foot minimum setback	57.41 feet
Side (east, Interstate 75)	No setback required	Closest point not dimensioned**
Side (west)	No setback required	127.59 feet
Building Height	Minimum 1 story, 14 feet, maximum 3 stories, 45 feet	1 story, story height not defined, though clearly in excess of 14 feet***
Lot Coverage	No requirement	N/A
Open Space	15 percent	Not specifically provided, but landscaping exceeds 20 percent, so the open space requirement is met

* 75 percent of the building façade must meet the required building line, while up to 25 percent of the façade can be set back to allow for architectural consideration. In this case, only a narrow section of the proposed fireplace actually abuts the required building line. However, the Planning Commission may “*adjust the required building line to a maximum of 30 feet beyond the property line for projects incorporating a permanent space for an outdoor café, public space, or a cross access drive with an adjacent parcel. Outdoor cafés or public spaces must be developed as part of the primary building and must incorporate a permanent wall or landscaping area along the required building line.*” In this instance, the applicant has included a permanent outdoor café and public area with walkways connecting the café space to the public right-of-way sidewalks via a small public plaza. This permanent outdoor café and public space meet the requirements of Building Form A and permit the deviation from the required building line. The first part of the enclosed building, a permanently enclosed patio, is set back approximately 13 feet from the right-of-way. The remainder of the main building is set back within the 30-foot maximum permitted by the deviation.

** The site plan incorrectly identifies the frontage along I-75 as a front yard. This is considered a side yard and therefore no setback is required. Were it to be determined a front yard; the building

would have to be located along the 10-foot required building line. In this instance, the east boundary is a side yard and the labels should be revised on the site plan to reflect that condition.

***The minimum ground story height must be 14 feet or greater. While it appears that the proposed elevations demonstrate that the building is well in excess of this requirement, they only provide dimensions to the parapet and tower, not to the roof deck itself. A revised set of elevations should demonstrate that the roof deck is 14 feet or higher from the first floor grade.

Items to be Addressed: 1.) Correct the east boundary labels and setback lines to reflect its condition as a side yard. 2.) Demonstrate that the first floor is 14 feet or taller in height.

PARKING

Proposed Parking:

The site plan shows 142 total parking spaces throughout the site, with an additional 7 spaces shared between the restaurant and the PNC Center.

Parking Location:

While parking is not permitted in the front yard, the parking “*may be located in a side yard and abutting the required building line adjacent the primary building, so long as the parking is screened with a minimum 30-inch masonry wall on the required building line, or within 5 feet of the required building line, provided that a landscape treatment is added between the wall and the required building line.*” (Table 5.03.B.1) It appears as though a 30-inch CMU wall is proposed along the required building line and a hedgerow is proposed south, or behind the wall. To meet the Building Form A requirements, the wall and hedgerow must be switched so that the hedges are between the required building line and the wall.

Parking Calculations:

The parking calculations provided are as follows.

<u>Required</u>	<u>Provided</u>
One space for every two seats. 241 building seats 41 enclosed patio seats 16 exterior patio seats 298 total seats $298/2 = \mathbf{149 \text{ spaces required}}$	142 spaces (137 plus 5 barrier-free spaces) and 7 shared spaces with the PNC Center.

The applicant has submitted a letter, after working with the Zoning Administrator, to provide a recent update to a study prepared for the original site plan approval for this site. The conditions of the original approval have not changed in that the same number of spaces will be removed from the PNC Center overall site (224) and the new project will be required to provide its own

parking. The letter assumes the parking requirements are the same now as they were during the original approval. We made the applicant aware of this during the site plan review and corrected site plans were submitted with the new requirements (employee parking is no longer required for restaurants). The letter, however, was not revised. Given that fewer spaces are actually required under the new Ordinance for both the PNC Center and the restaurant, we have no objection to reviewing the letter as-is. It states that the site plan approved June 10, 2008 permitted the site plan to use 35 shared spaces from the PNC Center, in that it was required to provide 178 spaces but only included 143. The new plan is required to provide 149 spaces and only includes 142, but 7 spaces are proposed as shared with the PNC Center. We agree with the applicant's letter that states that the analysis provided in 2008 from Wells + Associates is still valid and that the greatly reduced shared parking arrangement is acceptable. Final documentation of the shared parking agreement must be submitted to the City during final site plan review.

Items to be Addressed: Relocate the proposed 30 inch wall and hedgerow so that the hedgerow is on the north side of the wall, along the required building line.

SITE ACCESS AND CIRCULATION

Vehicular access:

The site will be accessed a single cross access drive to the west with the existing bank, and across 4 maneuvering lanes shared with the larger PNC Center parking area. We have no objection to this approach.

Pedestrian access:

The site has an 8-foot wide sidewalk along its Big Beaver Road frontage and sidewalks along the building's four sides to allow for safe pedestrian circulation. The applicant has provided extensive connections from the main sidewalk to the front entrance, to the outdoor cafe and to the parking area. All these amenities should facilitate safe and dedicated pedestrian access to the building from the street (in accordance with Section 13.10.C.5.b). A broad pedestrian plaza has been added at the north center of the site across the greenbelt to connect the outdoor café and pedestrian walkways there with the main sidewalk. This plaza faces the building's fireplace, which appears to be visible from both the interior and exterior of the building. The landscape plan shows two unidentified boxes in this plaza area that we understand may be potential park bench locations. This should be clarified during final site plan review.

Also, Section 13.10.C.4 requires that "*all sites with parking of 10 spaces or greater shall provide a bike rack for at least two bicycles within 50 feet of the building entrance.*" A bike rack should be added to the site plan to meet this requirement.

Items to be Addressed: A bike rack with capacity of at least two bicycles must be added to the site plan.

NATURAL RESOURCES

The site is an existing developed parking area with typical site landscaping. The proposed plan would not impact any protected natural features. The plan does, however, add new landscape materials and landscape islands. The site plan shows that 17 trees are being removed.

Items to be Addressed: None.

LANDSCAPING

The application includes a detailed landscape plan. The plan shows the requirements and proposed conditions for the greenbelt, street trees, and landscaped area. It does not detail how the project complies with the parking lot landscaping requirements.

Greenbelt:

A ten (10) foot wide greenbelt has been provided along the public street frontage.

Street trees:

The site plan shows existing 4 street trees on site, and details plans to add 5 new trees. The landscape plan does not clearly show the existing trees proposed to remain or label them, but they can be faintly seen through the textured pattern identifying the landscape area. The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, *or fraction thereof*, of frontage abutting a public road right-of-way. This site has 280 feet of frontage, requiring 9.33 (10) trees. An addition street tree must be added to meet minimum Ordinance requirements.

Minimum landscaped area:

The site plan must provide 20 percent overall landscaped area. The site is 1.93 acres, requiring 16,814 square feet of landscaping. The proposed landscape plan provides 16,846 total square feet of landscaped area.

Parking lot landscaping:

Section 13.02.C establishes the requirements for parking lot landscaping. The site plan does not include notes on how the parking lot landscaping requirements are being met. They are as follows, with our analysis following.

a. There shall be a minimum of one (1) tree for every eight (8) parking spaces. Aside from the 9 proposed greenbelt trees (5 new, 4 existing), there are 25 trees existing or proposed, predominantly in the landscape islands of the parking lot, but several are also proposed in the adjacent landscaped areas surrounding the building. Also, it appears that 4 of the trees are proposed south of the property boundary, off the subject site. There are 142 parking spaces proposed on the site, requiring 18 trees. Even if the 4 trees south of the boundary are omitted from the calculations, we believe this requirement is satisfied in that 13 trees are truly located

within landscaped islands or “bumpouts” defining the parking area, and the remaining trees are along the perimeter of the lot.

b. Landscaping shall be arranged in curbed islands within the parking lot which shall not be less than two hundred (200) square feet in area. Modifications in curbing may be permitted when islands are used as part of the stormwater management system. Satisfied.

c. A minimum distance of three (3) feet from the backside of the curb and the proposed landscape plantings shall be provided. Where vehicles overhang a landscape island or strip, a minimum distance of five (5) feet from the backside of the curb and the proposed landscape plantings shall be provided. Satisfied.

d. An equivalent amount of landscape plantings at the perimeter of parking lots may be approved where landscaping within parking lots would be impractical due to the size of the parking lot, detrimental to safe and efficient traffic flow, or would create an unreasonable burden for maintenance and snowplowing, provided all other landscaping requirements are met. Satisfied (see parking lot tree requirements, above)

Parking lots adjacent a public right-of-way must also meet specific requirements for screening, but these have been addressed by the more stringent requirements for Building Form A in the form-based code requirements, and with the conditions noted above with regard to placement of the hedgerow and wall, they will be satisfied.

Items to be Addressed: Add one street tree.

SUBMITTAL REQUIREMENTS

Section 8.05.A.7 establishes the requirements for preliminary site plan submittals. The cover sheet of the application is signed and sealed by James Butler, Engineer. Sheets A110 (floor plan) and A210 (exterior elevations) are signed and sealed by Kevin Hendrickson, Architect. The application is complete with the following exceptions:

1. The location of existing cross access easements on abutting properties and the location of proposed cross access or joint drive easements on the subject property must be provided. This site relies completely on cross access.
2. Preliminary, dimensioned floor plans must be provided. The floor plans have very limited dimensions (overall building length and width) but no other interior dimensions. Full dimensions should be provided.
3. Lighting plan indicating proposed photometrics, height of light fixtures, proposed light fixtures, and proposed methods of shielding must be provided. No photometrics have been provided.
4. Samples, swatches, or manufacturer’s specification sheets of the predominant proposed exterior materials and colors of all buildings and permanent structures, including walls and fences must be provided. The application does not include this information, but we are comfortable with the applicant providing it at the meeting.

Items to be Addressed: *Address submittal requirement deficiencies noted above.*

RECOMMENDATIONS

We support the proposed project and believe the project does meet or exceed minimum requirements, with several small conditions for clarification and compliance with minor elements required by the Zoning Ordinance. We recommend the Planning Commission approve the preliminary site plan application with the following conditions:

1. Correct the east boundary labels and setback lines to reflect its condition as a side yard.
2. Demonstrate that the first floor is 14 feet or taller in height.
3. Relocate the proposed 30 inch wall and hedgerow so that the hedgerow is on the north side of the wall, along the required building line.
4. Add a bike rack with capacity of at least two bicycles.
5. Add one street tree.
6. Show the location of existing cross access easements on abutting properties and the location of proposed cross access or joint drive easements on the subject property.
7. Provide full dimensions on the preliminary floor plans.
8. Provide a lighting plan indicating proposed photometrics, height of light fixtures, proposed light fixtures, and proposed methods of shielding.
9. Provide samples, swatches, or manufacturer's specification sheets of the predominant proposed exterior materials and colors of all buildings and permanent structures, including walls and fences. We are comfortable with the applicant providing this at the meeting.



CARLISLE/WORTMAN ASSOCIATES, INC.
Zachary G. Branigan, LEED AP, AICP
Associate

225-02-1111



PROFESSIONAL ENGINEERING ASSOCIATES, INC.

CIVIL ENGINEERS / LAND SURVEYORS / LANDSCAPE ARCHITECTS

2430 Rochester Court, Suite 100, Troy, MI 48083-1872

(248) 689-9090 www.peainc.com fax (248) 689-1044

James P. Butler, PE

President

David E. Cole, PS

Vice President

Wendy E. Graham, PE

Vice President

David N. Hunter, PE, PS, LEED AP

Vice President

June 30, 2011

PEA Project No: 2008-059

Mr. Brent Savidant, Planning Director
City of Troy Planning Department
500 West Big Beaver Road
Troy, Michigan 48083

**RE: GRANITE CITY FOOD AND BREWERY/PNC CENTER
SUPPLEMENT TO THE SHARED PARKING ANALYSIS
CITY OF TROY, OAKLAND COUNTY, MICHIGAN**

Dear Mr. Savidant:

Pursuant to your request, we have taken the opportunity to look into the revising the "Shared Parking Analysis" dated June 4, 2008 prepared by Wells + Associates in a effort to make it consistent with the revised site plan configuration recently submitted for site plan approval. Unfortunately, Wells + Associates is no longer in business in the State of Michigan, so having them update the analysis is not going to be possible. In lieu of rewriting the report, it has been agreed upon by our offices that Professional Engineering Associates (PEA) will provide a supplemental letter outlining the changes to the initial study based on the revised site plan.

The original site plan for the Granite City development that was approved on June 10, 2008 by the City of Troy (SU-357) was required to provide 178 parking spaces (per the Zoning Ordinance). Per the approved site plan only 143 parking spaces were provided within the Granite City development area and an additional 35 parking spaces were being proposed to be "shared" with the National City Center (Now the PNC Center) to meet the ordinance requirements of 178 parking spaces. It should be noted that the development of the Granite City proposed to eliminate 224 parking spaces from the overall PNC Center development.

Per the revised site plan for the Granite City development recently submitted for site plan approval, is required to provide 179 parking spaces. Per the revised site plan configuration only 145 parking spaces are provided within the development area for the Granite City and an additional 35 parking spaces are being proposed to be "shared" with the PNC Center to meet the ordinance requirements for number of required parking spaces. It should be noted that the development of the Granite City is still proposing to eliminate 224 parking spaces from the overall PNC Center development.

Given the fact that the parking provided for the revised site plan is almost exactly similar to the previously approved site plan and the fact that there has been no significant changes to the uses noted in the analysis, it is our opinion that the findings noted in the Wells + Associates analysis are still valid.

If you should have any questions or require any additional information, please feel free to contact this office.

2009 American Society of Landscape Architects-Michigan Chapter "Firm of the Year"

Howell Office 2900 E. Grand River Avenue, Howell, MI 48843 • (517) 546-8583 • Fax (517) 546-8973

• Municipal Engineering • Traffic Engineering • Land Surveying • Asset Management • Sustainable Design • Geotechnical Engineering • Site Development • Wetland Services •

MR. BRENT SAVIDANT, PLANNING DIRECTOR
CITY OF TROY PLANNING DEPARTMENT
RE: GRANITE CITY FOOD AND BREWERY
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

JUNE 30, 2011
PROJECT NO: 2008-059
PAGE 2

Sincerely,

PROFESSIONAL ENGINEERING ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "JPB" with a stylized flourish extending from the end.

James P. Butler, PE
President

JPB:jpb



WELLS + ASSOCIATES

June 4, 2008

Mr. Anthony Antone, Esq.
Vice President – Development
KOJAIAN MANAGEMENT CORPORATION
39400 Woodward Avenue, Suite 250
Bloomfield Hills, MI 48304

Re: Granite City Brewery – National City Center
Shared Parking Analysis
Troy, Michigan

Dear Mr. Antone:

Wells + Associates is pleased to provide this shared parking analysis for the proposed Granite City Brewery site located on the south side of Big Beaver Road and west of I-75. The proposed 10,863 square foot (SF) restaurant (including 1,941 SF of patio seating area) would be located within the existing parking field for the National City Center. The development of the Granite City Brewery would result in a reduction of 224 parking spaces from the existing parking field, with a resulting future total of 1,683 parking spaces to serve both the National City Center and the Granite City Brewery.

The purpose of this shared parking study is to determine the adequacy of the future parking supply to serve the mix of land uses between the National City Center and the proposed Granite City Brewery. This analysis forecasts peak parking demand, taking into account seasonal, daily, and hourly variations in parking demands for each land use. This analysis is based on City of Troy parking ordinance, the Urban Land Institute (ULI) shared parking methodology, and the most recent edition of Parking Generation published by the Institute of Transportation Engineers (ITE).

Three shared parking scenarios were evaluated in this study, based on (1) City of Troy base parking indices, (2) ULI base parking indices, and (3) ITE Parking Generation. ULI seasonal, daily, and hourly parking demand variation patterns were used in all three scenarios. These results are compared to the parking requirements based on the City of Troy parking ordinance without the application of shared parking methodologies.

Shared Parking Concept

According to ULI “shared parking is defined as a parking space that can be used to serve two or more individual land uses without conflict or encroachment.” ULI further indicates that “the opportunity to implement shared parking is the result of two conditions: 1) Variations in the peak accumulation of parking vehicles as the result of different activity patterns of adjacent nearby land uses (by hour, by day, by season); and 2) Relationships among land use activities that result in peoples’ attraction to two or more land uses on a single auto trip to a given area or development.” The City of Troy parking ordinance does not account for the hourly variations in the different uses within the development. The

ordinance assumes that the peak parking demand for each of the individual uses occur at the same time. In reality, the peaks of the different uses do not coincide and therefore the site can benefit from an overall reduction in required parking.

The parking ratios utilized in the shared parking analysis assume that nearly all users arrive by private auto with typical auto occupancy for the specific use. These base ratios are appropriate for conditions of free parking and negligible use of public transit which describes the National City Center and Granite City Brewery. The shared parking concept is published in the “Shared Parking”, Second Edition, 2005. The analyses presented below apply the hourly, daily and monthly distribution principles described above to the Granite City Brewery and National City Center developments.

Development Concept

The Granite City Brewery is proposed to include an 8,922 SF restaurant with a 1,941 SF patio seating area, with an overall area of 10,863 SF and a seating capacity of 296 seats. The restaurant would be located within the northern portion of the existing parking field for the National City Center. The proposed site layout would maintain internal connections between the restaurant and the National City Center such that the parking field would serve both developments.

The National City Center consists of the National City office tower and the Annex, which includes office, retail, and restaurant space. Currently, 24 percent of the office tower and 25 percent of the Annex are vacant. Based on information provided by KOJAIAN Management Corporation, the vacant space in the tower will be leased for office use, and the vacant space in the Annex will be leased for any of the four existing uses. For the purposes of this analysis, it was assumed that the vacant Annex space would be leased proportionate to the existing Annex uses. A detail of the land uses and corresponding sizes for both developments is attached to this letter. The total space within the National City Center includes:

Office:	493,867	SF	
Medical Office:	13,611	SF	
Retail:	4,036	SF	
<u>Restaurant:</u>	<u>17,923</u>	<u>SF</u>	(485 seats)
	529,437	SF	

The future parking supply, with the Granite City Brewery, would include 1,683 off-street parking spaces. Additionally, there are a number of currently landscaped areas that could be converted to parking spaces if required to meet future demand. These areas include 118 land-banked parking spaces, which would result in a total future parking supply of 1,801 spaces. The following sections outline the parking requirements for each scenario, which are summarized in Table I.

City of Troy Parking Ordinance Requirements

Peak parking demands were calculated for the Granite City Brewery and National City Center based on the off-street parking requirements outlined in Chapter 39 of the City of Troy Zoning Ordinance, the Granite City Brewery development program, and the National City Center land uses. Based on City Ordinance, a total of 2,582 parking spaces would be required. This is 781 (or 43%) more spaces than

the total 1,801-space future parking supply. This requirement is the sum of the peak demands of each individual land use; it does not take hourly, daily and monthly demand variations.

City of Troy Parking Ordinance Requirements with Demand Variation Adjustments

Peak parking demands were calculated in this scenario based on the City of Troy parking indices, the Granite City Brewery development program, the National City Center land uses, and ULI seasonal, daily, and hourly parking demand variation patterns. Based on this analysis, a peak demand of 2,432 parking spaces would be required. This is 631 (or 35%) spaces more than the total 1,801-space future parking supply. However, this would lower the required parking by 150 spaces (or 5.8%) as compared to the City’s ordinance.

ULI Parking Requirements with Demand Variation Adjustments

Peak parking demands were calculated in this scenario based on the Granite City Brewery development program, the National City Center land uses, ULI base parking indices, and ULI seasonal, daily, and hourly parking demand variation patterns. Based on this analysis, a peak demand of 1,791 parking spaces would be required. This is 10 spaces (or 1%) less than the total 1,801-space future parking supply. Therefore, the future parking demand would be adequately accommodated by the off-street parking provided with the conversion of 108 land-banked parking spaces. Further, this would lower the City’s requirements by 791 spaces (or 31%).

ITE Parking Requirements with Demand Variation Adjustments

Peak parking demands were calculated in this scenario based on the Granite City Brewery development program, the National City Center land uses, ITE parking indices, and ULI seasonal, daily, and hourly parking demand variation patterns. Based on this analysis, a peak demand of 1,550 parking spaces would be required. This is 133 spaces (or 8%) less than the future 1,683-space parking supply without conversion of the land-banked parking spaces, and 251 spaces (or 14%) less than the total 1,801-space future parking supply. Therefore, the future parking demand would be adequately accommodated by the off-street parking provided without conversion of the land-banked parking spaces. Further, this would lower the City’s requirements by 1,032 spaces (or 40%).

Table I
Granite City Brewery & National City Center
Parking Spaces Required

	Total Number of Spaces Provided	Number of Spaces per Troy Ordinance	Number of Required Spaces per Troy Ordinance with ULI Shared Parking	Number of Required Spaces per ULI Indices with ULI Shared Parking	Number of Required Spaces per ITE Indices with ULI Shared Parking
Granite City Brewery & National City Center	1801*	2,582	2,432	1,791	1,550

* Includes the conversion of 118 land-banked parking spaces.

Recommendation

Based on the analysis provided above, the parking supply that would be provided with the development of the Granite City Brewery will be adequate for the forecast demand between the restaurant and the National City Center. This evaluation is based on the application of ULI and ITE parking indices and ULI seasonal, daily and hourly parking demand variation patterns as presented in "Shared Parking", Second Edition, 2005. A breakdown of the required parking spaces for each land use and the shared parking reductions is attached to this letter.

By applying the parking demand variation patterns to the ITE parking requirements, the proposed 1,683-space parking supply would accommodate the forecast demand without conversion of the 118 available land-banked parking spaces. By applying the parking demand variation patterns to the ULI parking requirements, the forecast demand would require the conversion of 108 of the available 118 land-banked parking spaces. We recommend that the land-banked parking spaces be converted in the future if demand exceeds the available supply.

Please feel free to contact our office if we can be of further assistance.

Sincerely,



Michael J. Labadie, P.E.
Principal Associate



Kelly K. Ferencz, P.E.
Senior Associate

**Granite City Brewery
Land Use Summary**

	Description	Amount	Units	Description	Amount	Units
National City Tower	Occupied			Vacant		
	Office	332,329	SF	Office	107,080	SF
	Medical Office	9,767	SF			
National City Annex	Occupied			Vacant		
	Office	41,057	SF	Office	13,401	SF
	Medical Office	2,859	SF	Medical Office	985	SF
	Retail	3,051	SF	Retail	985	SF
	Restaurant	13,587	SF	Restaurant	4,336	SF
		368	Seats		117	Seats
Granite City Brewery	Proposed					
	Restaurant	10,863	SF			
		296	Seats			
Totals		Office	493,867		SF	
		Medical Office	13,611		SF	
		Retail	4,036		SF	
		Restaurant	28,786		SF	
			781		Seats	

**Granite City Brewery
Shared Parking Analysis**

	Description	Amount	Units	Required Parking Spaces	Shared Parking Reduction	Shared Parking Requirement
Troy Ordinance	Office	493,867	SF	1,976		
	Medical Office	13,611	SF	116	5.8%	2,432
	Retail	4,036	SF	21		
	Restaurant	28,786	SF	469		
		781	Seats			
			Total	2,582		
ULI Rates	Office	493,867	SF	1,387		
	Medical Office	13,611	SF	61	11.2%	1,791
	Retail	4,036	SF	15		
	Restaurant	28,786	SF	485		
		781	Seats			
			Total	1,948		
ITE Rates	Office	493,867	SF	1,267		
	Medical Office	13,611	SF	47	7.8%	1,550
	Retail	4,036	SF	11		
	Restaurant	28,786	SF	357		
		781	Seats			
			Total	1,682		

PRELIMINARY SITE PLAN DRAWINGS FOR GRANITE CITY FOOD AND BREWERY

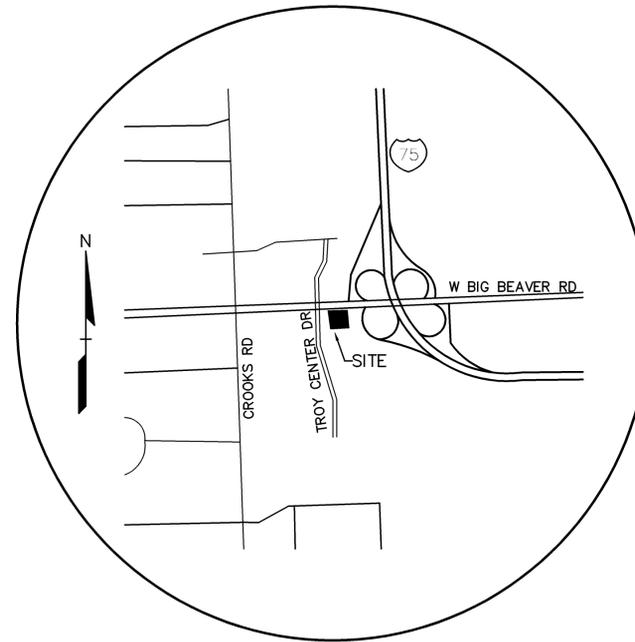
PART OF THE NORTHWEST 1/4 OF SECTION 28, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

LEGAL DESCRIPTION:

(Per Professional Engineering Associates, Inc.)

Land situated in the City of Troy, Oakland County, Michigan described as follows:

Part of the Northwest 1/4 of Section 28, Township 2 North, Range 11 East, City of Troy, Oakland County, Michigan, described as: Commencing at the Northwest Corner of Section 28; thence along the north line of said Section 28, North 87 degrees 28 minutes 23 seconds East, 1257.91 feet; thence along the east Right-of-Way line of Troy Center Drive (120 feet wide), South 02 degrees 31 minutes 05 seconds East, 332.19 feet; thence North 87 degrees 28 minutes 55 seconds East, 220.00 feet to the Point-of-Beginning; thence North 02 degrees 31 minutes 05 seconds West, 230.00 feet to the south Right-of-Way line of Big Beaver Road (204 feet wide); thence along said Right-of-Way, North 87 degrees 28 minutes 55 seconds, 279.81 feet to the southwesterly Right-of-Way line of I-75 expressway; thence along said southwesterly Right-of-Way, South 45 degrees 23 minutes 49 seconds East, 174.67 feet; and South 02 degrees 31 minutes 05 seconds, 102.00 feet; thence South 87 degrees 28 minutes 55 seconds West, 398.66 feet to the Point-of-Beginning. Containing 1.93 acres of land, more or less.



LOCATION MAP NO SCALE

INDEX OF DRAWINGS:

- COVER SHEET
- P-1.0 TOPOGRAPHIC SURVEY
- P-1.1 TREE PRESERVATION PLAN
- P-2.0 PRELIMINARY SITE PLAN
- P-3.0 PRELIMINARY GRADING & UTILITY PLAN
- P-4.0 PRELIMINARY DETAILS
- L-1.0 PRELIMINARY LANDSCAPE PLAN
- A 110 PRELIMINARY FLOOR PLAN
- A 210 PRELIMINARY EXTERIOR ELEVATIONS

PROJECT ENGINEER/LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
2430 ROCHESTER COURT, SUITE 100
TROY, MICHIGAN 48083
CONTACT: JAMES P. BUTLER, PE
JEFF SMITH, RLA
PHONE: (248) 689-9090
FAX: (248) 689-1044

NO.	BY	CHK	DESCRIPTION	DATE
5	JPB		REVISED BUILDING FOOTPRINT - AMENDED SITE PLAN	8-15-11
4	EMW	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	8-5-08
3	EMW	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
2	EMW	JPB	REVISED PER CITY OF TROY AND CLIENT COMMENTS	5-21-08
1	EMW	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-6-08

CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS RESPONSIBILITY SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

PROFESSIONAL ENGINEERING ASSOCIATES
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

BEHM CONSTRUCTION CONSULTING SERVICES
7704 WEST JUSTICE STREET
SIOUX FALLS, SD 57106

COVER SHEET
GRANITE CITY FOOD AND BREWERY
PART OF THE NW 1/4 OF SECTION 28, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	EMW	DN.	PB	SUR.	N/A	P.M.	JPB
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ORIGINAL
ISSUE DATE: APRIL 18, 2008

PEA JOB NO. 2008-059

SCALE: 1" = 30'

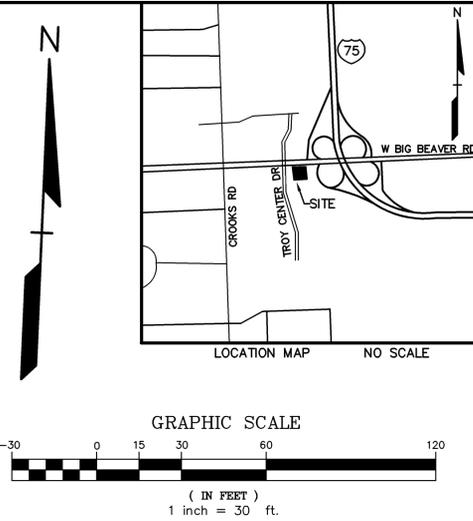
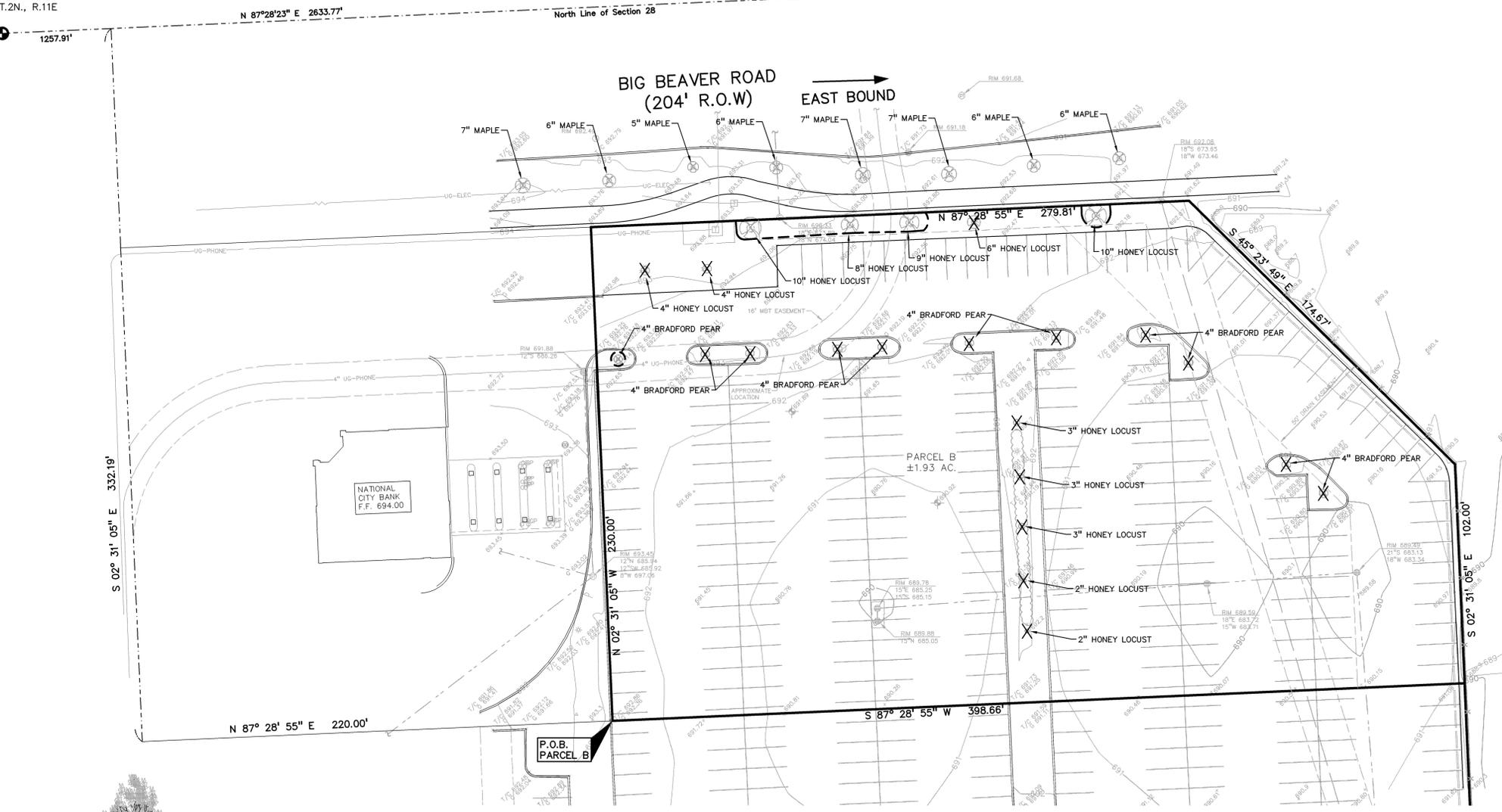
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NORTH WEST CORNER
SECTION 28
T.2N., R.11E

N. 1/4 CORNER
SECTION 28
T.2N., R.11E.



NO.	BY	CHK	DESCRIPTION	DATE
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LEGEND

EXISTING

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- RECORDED
- MEASURED
- CALCULATED

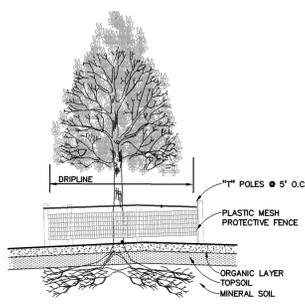
PROPOSED

- ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDBOX
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- CATCH BASIN
- ILET (NO RECORDING LINES)
- YARD DRAIN (2" DIA. & SMALLER)
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALIBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- AS BUILT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT
- WETLAND
- GRAVEL SHOULDER
- 6" DIA. (6" DIA.)
- STANDARD HEAVY DUTY DEEP STRENGTH

REFERENCE DRAWINGS

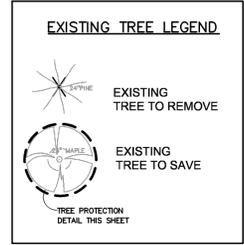
FLOOD PLAIN: ZONE "X" AREA OF MINIMAL FLOODING, FEMA COMMUNITY PANEL # 260180 0003E
 OTHER: PEA JOB # 2002-233 DATED 01-06-03
 OTHER: PEA JOB # 2005-134 DATED 7-29-05
 OTHER: PEA JOB # 2007-211 DATED 11-26-07

FLOOD PLAIN NOTE:
 PARCEL IS IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 2612500541F, DATED SEPTEMBER 29, 2006.



TREE PROTECTION DETAIL
NOT TO SCALE

- TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. UNDER NO CIRCUMSTANCES SHALL PROTECTIVE FENCING BE REMOVED WITHOUT PROPER APPROVAL FROM THE CITY OF TROY.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN DRIP LINES.
- ALL REQUIRED SWALES NEED TO BE DIRECTED AROUND PROTECTED AREAS. IN INSTANCES WHERE SWALES ARE APPROVED THROUGH PROTECTED AREAS, THEY NEED TO BE HAND DUG.
- MACHINERY OF ANY KIND IS PROHIBITED.
- GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE.
- ALL UTILITY SERVICE REQUEST MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- IF TREE PROTECTION CANNOT BE MAINTAINED FOR A TREE THROUGHOUT THE CONSTRUCTION PERIOD, REPLACEMENT OF THAT TREE MAY BE REQUIRED PRIOR TO THE ISSUANCE OF THE "CERTIFICATE OF OCCUPANCY."
- REGULATED WOODLAND OR REGULATED TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED, WHETHER OR NOT THEY ARE SHOWN ON THE PLAN.
- STAKES SHALL BE METAL 1/2" POLES SPACED 5' O.C.



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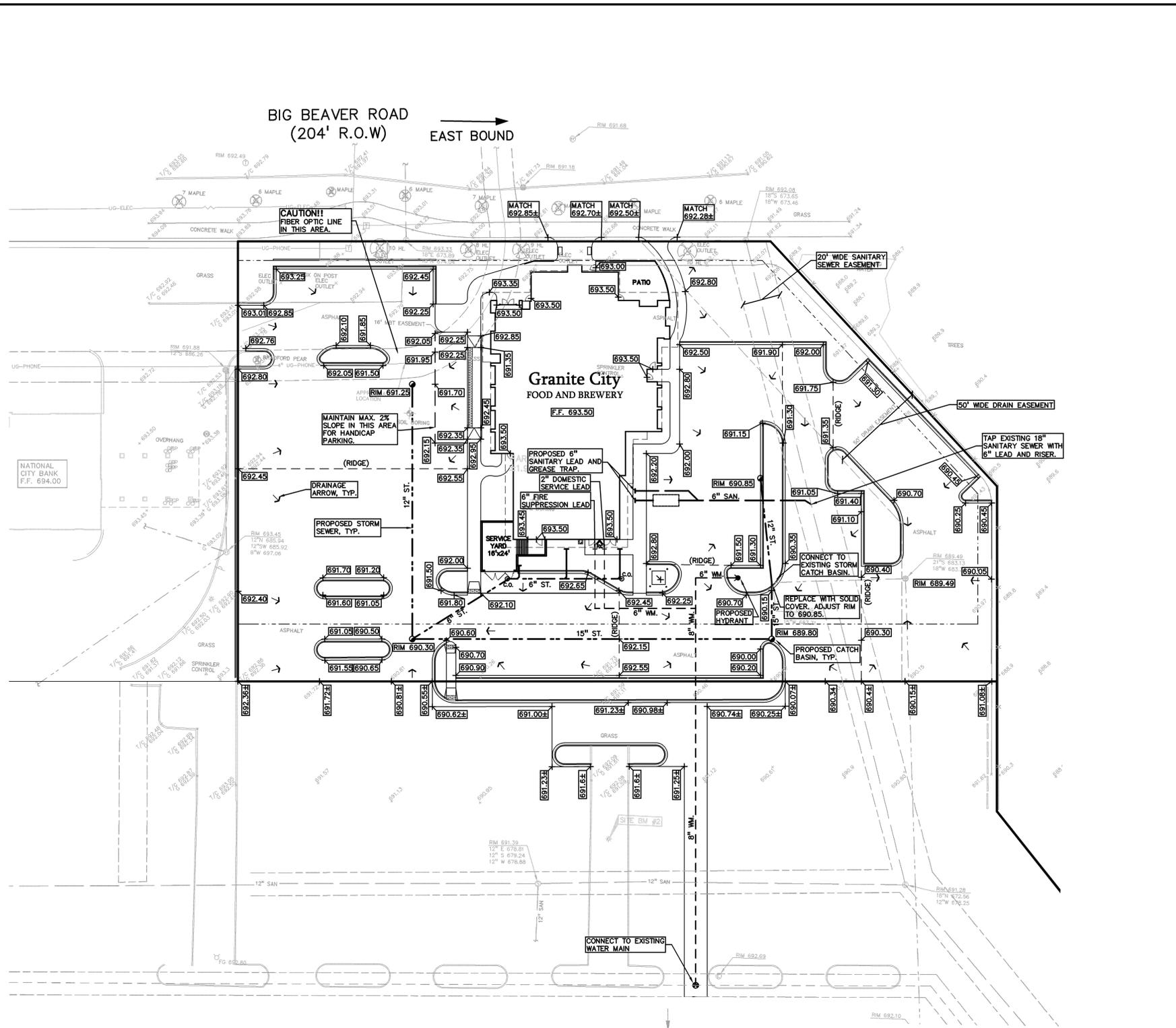
BEHM CONSTRUCTION CONSULTING SERVICES
 7704 WEST JUSTICE STREET
 SIOUX FALLS, SD 57106

TREE PRESERVATION PLAN
 GRANITE CITY FOOD AND BREWERY
 PART OF THE NW 1/4 OF SECTION 28, T. 2 N., R. 11 E.,
 CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN

DES.	EMW	DN.	PB	SUR.	N/A	P.M.	JPB
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ORIGINAL
 ISSUE DATE: APRIL 18, 2008
 PEA JOB NO. 2008-059
 SCALE: 1" = 30'
 DRAWING NUMBER:
P-1.1

XREF: L:\2008059\DWG\TOPBASE-08059.DWG
 XREF: L:\2008059\DWG\SITE PLAN BASE-08059.DWG
 XREF: L:\2008059\DWG\SITE PLAN TELK-08059.DWG



BIG BEAVER ROAD
(204' R.O.W) EAST BOUND

CAUTION! FIBER OPTIC LINE IN THIS AREA.

Granite City
FOOD AND BREWERY
F.F. 693.50

PROPOSED 6" SANITARY LEAD AND GREASE TRAP

2" DOMESTIC SERVICE LEAD

6" FIRE SUPPRESSION LEAD

REPLACE WITH SOLID COVER, ADJUST RIM TO 690.85.

PROPOSED CATCH BASIN, TYP.

CONNECT TO EXISTING WATER MAIN

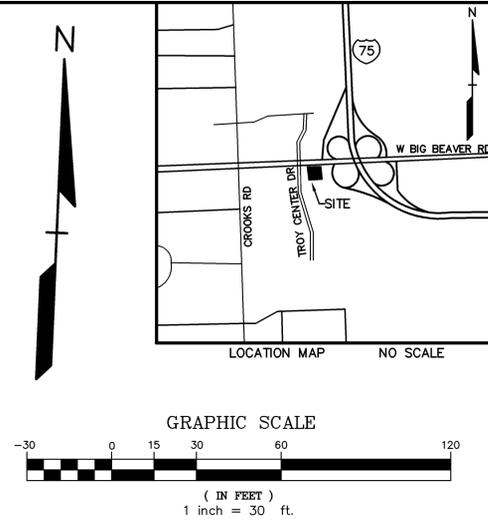
SYMBOLS: GRADING

XXXX.XX PROPOSED SPOT GRADE ELEVATION
ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

—695— PROPOSED CONTOUR LINE

GENERAL GRADING AND EARTHWORK NOTES:

- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
- ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ADD 0.50' TO OBTAIN TOP OF CURB ELEVATION.
- THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.



LEGEND

EXISTING

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- RECORDED
- MEASURED
- CALCULATED

PROPOSED

- ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANGHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, H.D., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- CATCH BASIN
- INLET (NO INCHING LINES)
- YARD DRAIN (2" DIA. & SMALLER)
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALIBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- AS BUILT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT
- MELAND MELT AND SEAL
- GRAVEL SHOULDER
- STANDARD HEAVY DUTY
- DEEP DUTY
- STRENGTH

REFERENCE DRAWINGS

FLOOD PLAIN ZONE "C" AREA OF MINIMAL FLOODING, FEMA COMMUNITY PANEL # 260180 0003E
 OTHER PEA JOB # 2005-134 DATED 01-06-03
 OTHER PEA JOB # 2005-134 DATED 7-29-05
 OTHER PEA JOB # 2007-211 DATED 11-26-07

FLOOD PLAIN NOTE:
 PARCEL IS IN ZONE "XII" AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 2612500541F, DATED SEPTEMBER 29, 2006.

- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF TROY STANDARDS AND REQUIREMENTS.
 - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL THE NEW WATER MAIN PASSES ALL PRESSURE AND BACTERIOLOGICAL TESTS.
 - REFER TO CITY OF TROY STANDARD DETAIL SHEETS INCLUDED WITH THE CONSTRUCTION PLANS FOR DETAILS AND NOTES.
 - ALL WATER MAIN 3" OR LARGER SHALL BE CLASS 54 DUCTILE IRON W/ POLYETHYLENE WRAP.
 - ALL HYDRANTS TO BE A MINIMUM OF 5' FROM BACK OF CURB, TYP.
 - ALL WATER MAIN SHALL BE PROVIDED WITH 6.0 FEET MINIMUM COVER.
 - ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE C 76, CL IV CONCRETE PIPE W/ PREMIUM JOINTS, UNLESS OTHERWISE NOTED.
 - ALL STORM SEWER LEADS SHALL BE P.V.C. SOLID WALL PIPE, SCHEDULE 40 UNLESS OTHERWISE NOTED.
 - ALL 6" SANITARY SEWER LEADS SHALL BE P.V.C. SOLID WALL PIPE, SDR 23.5 W/ RUBBER GASKET JOINTS.
 - BOXES ARE TO BE PROVIDED FOR ALL CLEANOUTS. THE BOXES SHALL BE E.I.L.W. # 1565 OR APPROVED EQUAL.
 - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN SYSTEM ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE CITY OF TROY AND D.W.S.D.
 - ALL WATER MAIN SHALL BE INSTALLED WITHIN A 20' WIDE PUBLIC WATER MAIN EASEMENT.

STORMWATER DETENTION:

NO STORMWATER DETENTION IS PROPOSED FOR THIS SITE AS THE 'TOP OF TROY' COMPLEX HAS A DETENTION BASIN WHICH CURRENTLY SERVES THIS PARCEL.

EXISTING RUNOFF COEFFICIENT 'C' OF PARCEL = 0.81
 RUNOFF COEFFICIENT 'C' AFTER PROPOSED DEVELOPMENT = 0.79
 THEREFORE, LESS STORMWATER RUNOFF WILL BE GENERATED BY THIS PROJECT.

NO.	BY	CHK	DESCRIPTION	DATE
1	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
2	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
3	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
4	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
5	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
6	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
7	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08
8	JPB	JPB	REVISED PER CITY OF TROY REVIEW COMMENTS	5-21-08

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BEHM CONSTRUCTION CONSULTING SERVICES
 7704 WEST JUSTICE STREET
 SIOUX FALLS, SD 57106

PRELIMINARY GRADING & UTILITY PLAN
GRANITE CITY FOOD AND BREWERY
 PART OF THE NW 1/4 OF SECTION 28, T. 2 N., R. 11 E.,
 CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN

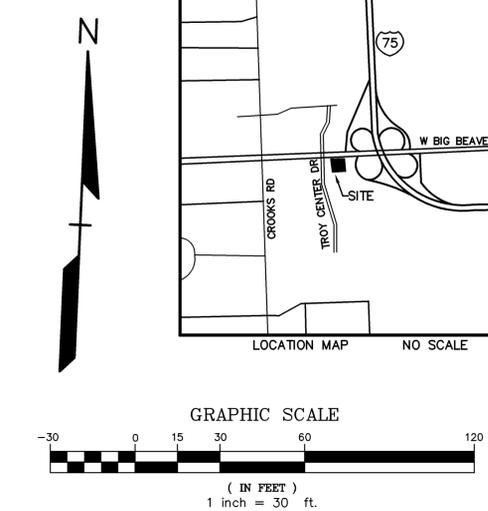
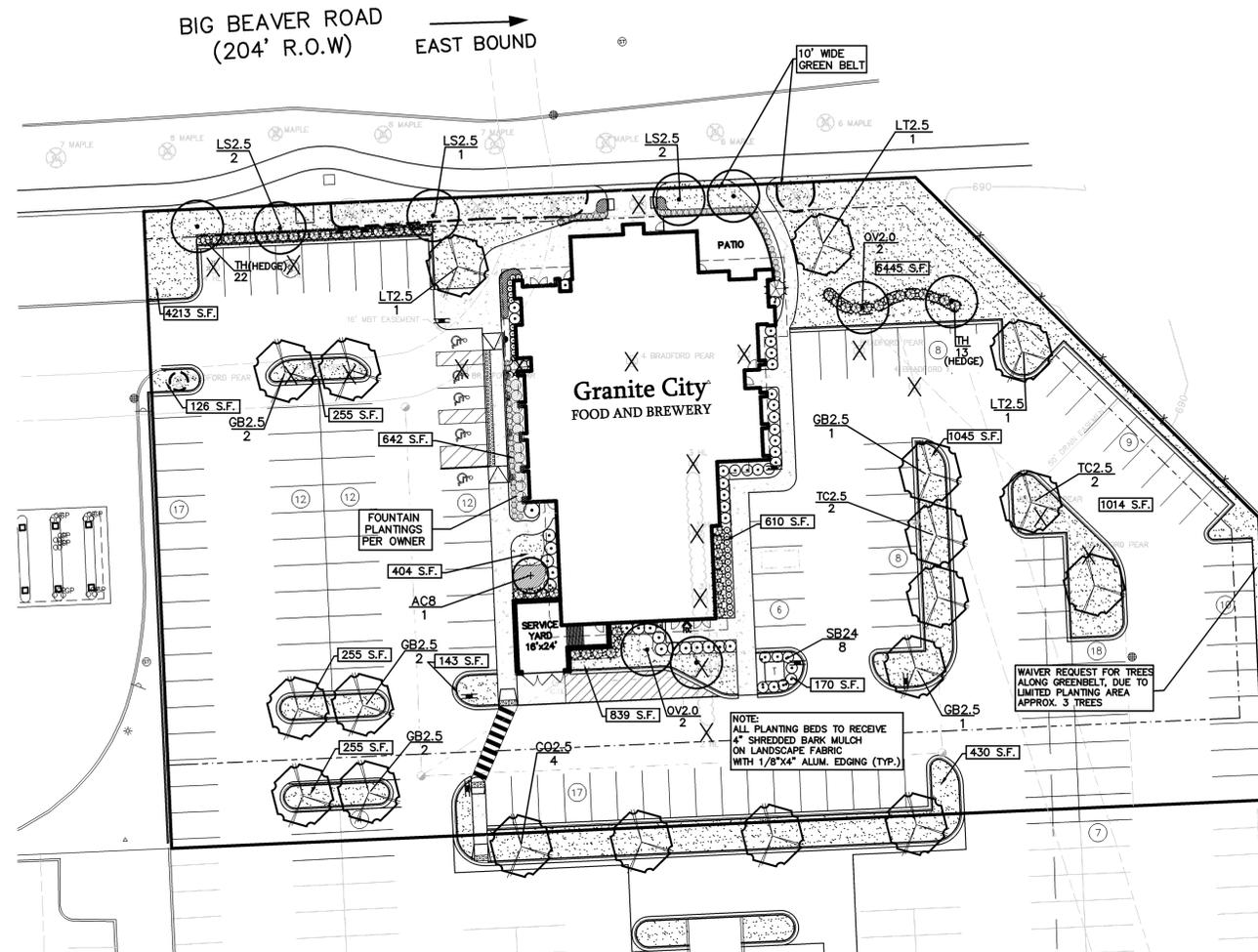
DES. E.M.W. DN. PB. SUR. N/A. P.M. J.P.B.

ORIGINAL ISSUE DATE: APRIL 18, 2008
 PEA JOB NO. 2008-059
 SCALE: 1" = 30'
 DRAWING NUMBER:
P-3.0

XREF: L:\2008059\DWG\TOPBASE-08059.DWG
 XREF: L:\2008059\DWG\SITE PLAN RELEASE-08059.DWG
 XREF: L:\2008059\DWG\SITE PLAN TELX-08059.DWG

GENERAL PLANTING NOTES:

- Landscape contractor shall visit site, inspect existing site conditions and review proposed planting and related work. In case of discrepancy between plan and plant list, plan shall govern quantities. Contact Landscape Architect with any concerns.
- Contractor shall verify locations of all on site utilities prior to beginning construction on his/her phase of work. Electric, gas, telephone, cable television may be located by calling MISS DIG 1-800-482-7171. Any damage or interruption of services shall be the responsibility of Contractor. Contractor shall coordinate all related activities with other trades on the job and shall report any unacceptable job conditions to Owner's Representative prior to commencing.
- All plant material to be premium grade nursery stock and shall satisfy American Association of Nurserymen standard for Nursery Stock. All landscape material shall be Northern Grown, No. 1. Grade.
- Contractor is responsible for verifying all quantities shown on landscape plan prior to pricing the work.
- The owner's representative reserves the right to reject any plant material not meeting specifications.
- All single stem shade trees to have straight trunks and symmetrical crowns.
- All single trunk shade trees to have a central leader; trees with forked or irregular trunks will not be accepted.
- All multi stem trees shall be heavily branched and have symmetrical crowns. One sided trees or those with thin or open crowns shall not be accepted.
- All evergreen trees shall be heavily branched and full to the ground, symmetrical in shape and not sheared for the last five growing seasons.
- All trees to have clay or clay loam balls, trees with sand balls will be rejected.
- No machinery is to be used within the drip line of existing trees; Hand grade all lawn areas within the drip line of existing trees.
- All tree locations shall be staked by Landscape Contractor and are subject to the approval of the landscape Architect prior to installation of the plant material.
- It is mandatory that positive drainage is provided away from all buildings.
- All planting beds shall receive 4" shredded hardwood bark mulch, see specifications. Shredded palette and died mulch will not be accepted.
- All landscaped areas shall receive 3" compacted topsoil.
- Maintenance: All plant material shall be maintained in good condition by mowing, watering, mulch, etc., so as to present a healthy neat and orderly appearance free from refuse and debris.
- All unhealthy and dead plant material shall be replaced within (1) year or the next appropriate planting season.

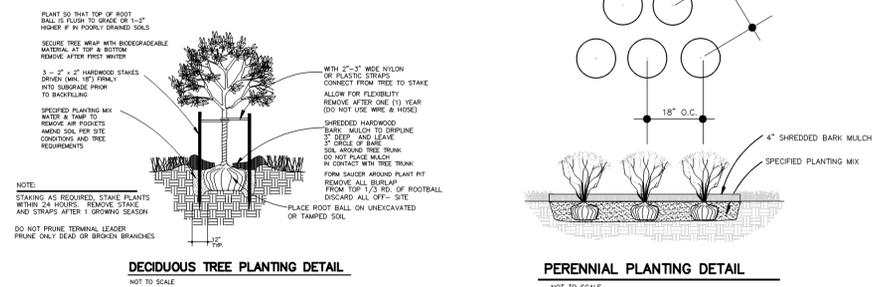
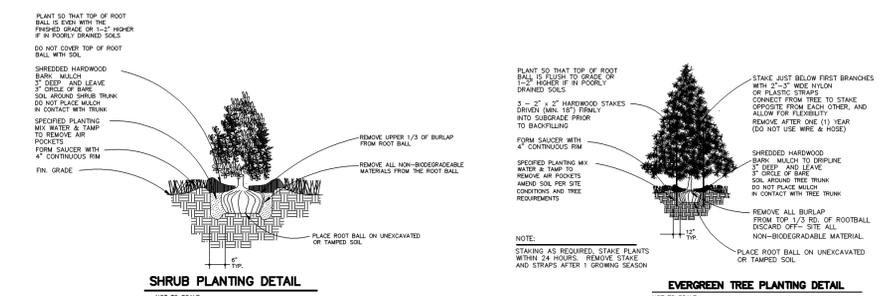


NO.	BY	DATE	DESCRIPTION
1	JPB	7-18-11	REVISED PER CITY OF TROY REVIEW COMMENTS
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3	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
4	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
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11	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
12	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
13	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
14	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
15	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
16	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
17	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
18	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
19	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS
20	JPB	8-1-11	REVISED PER CITY OF TROY REVIEW COMMENTS

PRELIMINARY LANDSCAPE COST OPINION:

TREES					
Quantity	Description	Min. Size	Spec.	Unit Price	Item Price
4	Hackberry	2.5" CAL	B&B	\$300.00	\$1,200.00
8	Princeton Sentry Ginkgo	2.5" CAL	B&B	\$300.00	\$2,400.00
5	Sweetgum	2.5" CAL	B&B	\$300.00	\$1,500.00
2	Tulip Tree	2.5" CAL	B&B	\$300.00	\$600.00
4	Sterling Silver Linden	2.5" CAL	B&B	\$300.00	\$1,200.00
				subtotal	\$6,900.00
ORNAMENTAL TREES					
Quantity	Description	Min. Size	Spec.	Unit Price	Item Price
1	Serviceberry	8" Ht.	B&B	\$280.00	\$280.00
4	American Hornbeam	2.0" Cal.	B&B	\$300.00	\$1,200.00
				subtotal	\$1,480.00
SHRUBS					
Quantity	Description	Min. Size	Spec.	Unit Price	Item Price
150	SHRUBS	24" Ht.	Cont.	\$40.00	\$6,000.00
				subtotal	\$6,000.00
PERENNIALS					
Quantity	Description	Min. Size	Spec.	Unit Price	Item Price
100	PERENNIALS	1 Gal.	Cont.	\$15.00	\$1,500.00
				subtotal	\$1,500.00
MISCELLANEOUS					
Quantity	Unit	Description	Unit Price	Item Price	
1520	SY.	Sod Lawn	\$5.00	\$7,600.00	
26	CY	3" deep shredded hardwood bark mulch	\$45.00	\$1,170.00	
			subtotal	\$8,770.00	
			GRAND TOTAL	\$24,650.00	

PLANT LIST					
QUAN.	KEY	COMMON/ BOTANICAL NAME	SIZE	SPEC.	COMMENTS
DECIDUOUS TREES					
4	CO2.5	Hackberry	2.5" Cal.	B&B	
8	GB2.5	Princeton Sentry Ginkgo	2.5" CAL.	B&B	
5	LS2.5	Sweetgum	2.5" Cal.	B&B	
3	LT2.5	Tulip tree	2.5" CAL.	B&B	
4	TC2.5	Sterling Silver Linden	2.5" Cal.	B&B	
ORNAMENTAL TREES					
1	AC8	Serviceberry	8' Ht.	B&B	
4	OV2.0	American Hop Hornbeam	2.0" Cal.	B&B	
SHRUBS					
8	SB	Anthony Waterer Spirea	24" Ht.	Cont.	
35	TH	Woodward Globe Arborvitae	30" Ht.	Cont.	



LANDSCAPE REQUIREMENTS:

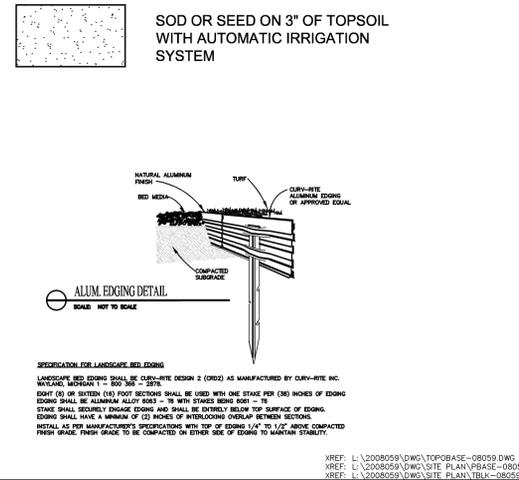
SITE:
1.93 ACRES (NET & GROSS)

LANDSCAPED AREA
20% REQUIRED: 16,814 SF PROVIDED: 16,846 SF

Required: 84,086 S.F. X 20% = (16,817 S.F.)
Provided: = (16,846 S.F.)

STREET TREES / GREEN BELT:
10' wide green belt and one tree shall be installed for each (30) l.f. of road frontage

Required: 280 l.f. / 30 l.f. = 9 trees
Provided: = 9 trees (4 existing & 5 proposed)
10' wide green belt



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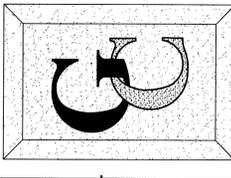
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PRELIMINARY LANDSCAPE PLAN
GRANITE CITY FOOD AND BREWERY
PART OF THE NEW 1/4 OF SECTION 28, T. 2 N., R. 11 E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. JTS SUR. N/A P.M. JPB
JTS DN. JTS JTS JPB

ORIGINAL ISSUE DATE: APRIL 18, 2008
PEA JOB NO. 2008-059
SCALE: 1" = 30'
DRAWING NUMBER: L-1

REF: L:\2008059\DWG\TOPBASE-08059.DWG
REF: L:\2008059\DWG\SITE PLAN\PS&E-08059.DWG
REF: L:\2008059\DWG\SITE PLAN\TEL-08059.DWG



899 WEST BIG BEAVER ROAD
 TROY, MI 48064

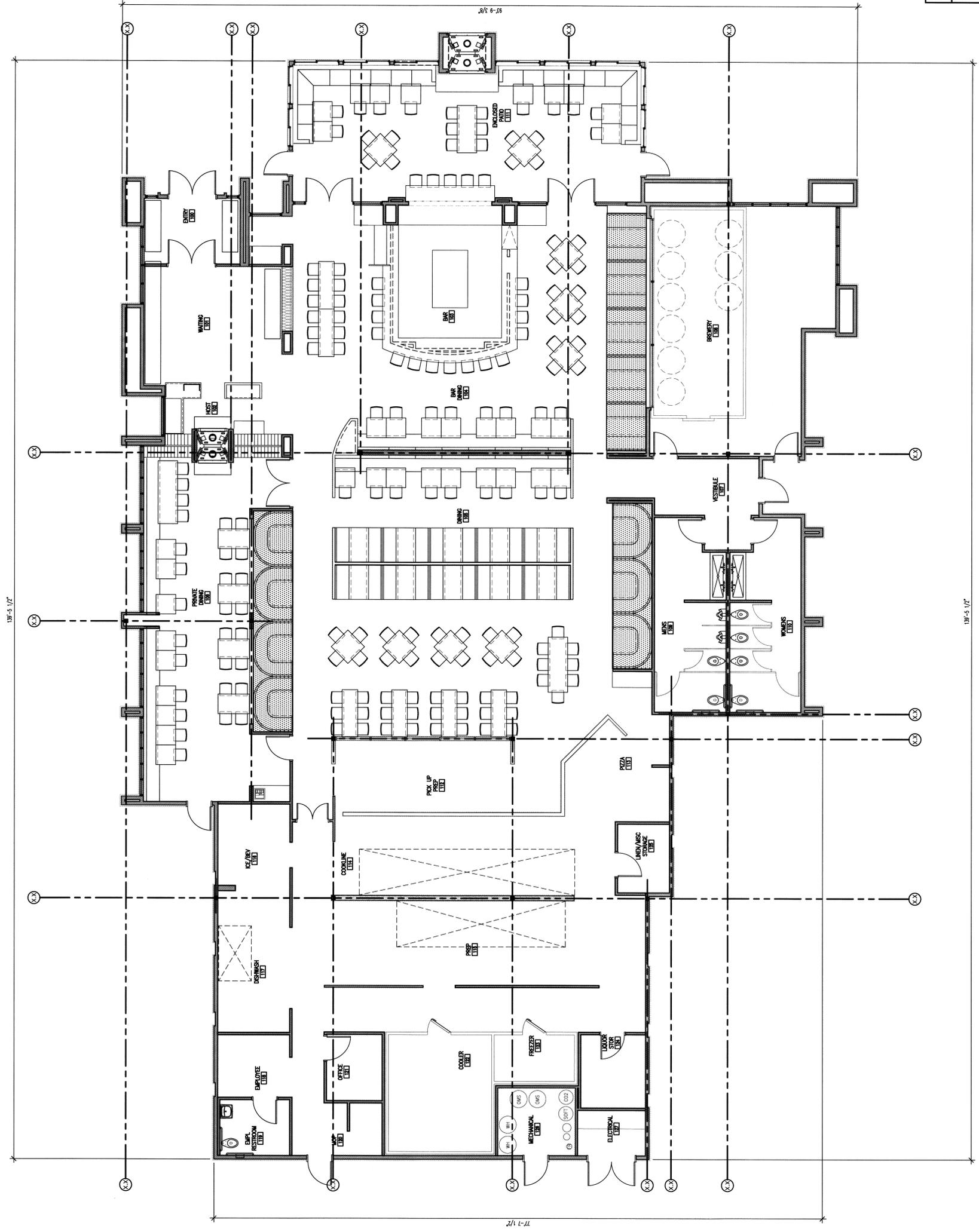
NO. REVISION

PROJECT NUMBER
110215
 SHEET NUMBER
A110

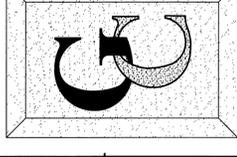
ORIGINAL ISSUE DATE - 6.15.2011
 DATE OF THE PRINTING -

GENERAL NOTES

1. ALL DIMS TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
2. PROVIDE FINISHES TO COMPLY WITH A FINISH OF NOT LESS THAN 2-1/8" OR 2-1/4" UNLESS NOTED OTHERWISE.
3. ALL BRIT INSULATION IN WALLS TO BE R-19. ALL CEILING INSULATION TO BE R-19.
4. REFER TO REFERENCE SHEETS FOR INTERIOR ELEVATION SHEETS FOR INTERIOR ELEVATIONS.
5. ALL WOOD FINISHES TO BE FIRE RETARDANT TREATED TYPICAL.
6. GC TO INSULATE BEHIND ALL FRAMING IN EXTERIOR WALLS TYPICAL.
7. SET FINISHES FOR INTERIOR SIDE FRAMING INFORMATION AND STRUCTURAL DRAWINGS FOR EXTERIOR WALL FINISHES.
8. EVIDENCE OF WIP MEASUREMENTS FOR FINISH PLANS SHEET.
9. REFER TO REFERENCE SHEETS FOR FINISHES.
10. HEIGHTS OF CEILING FINISHES TO BE AS SHOWN ON FINISH PLANS SHEET. FINISHES TO BE LEVEL WITHIN 1/8" PER 10 FEET EXCEPT WHERE NOTED OTHERWISE FOR FINISHES TO BE CONSTANT THROUGHOUT.
11. REFER TO REFERENCE SHEETS FOR ACCESSIBLE MOUNTING HEIGHTS DIAGRAM.



01 REFERENCE FLOOR PLAN
 SCALE: 3/16" = 1'-0"



**GRANITE CITY
 FOOD & BREWERY**

DO NOT SCALE DRAWINGS
 CONTRACTOR TO VERIFY
 ALL EXISTING CONDITIONS AND
 DIMENSIONS - NOTIFY ARCHITECT
 OF ANY DISCREPANCIES PRIOR
 TO BEGINNING CONSTRUCTION

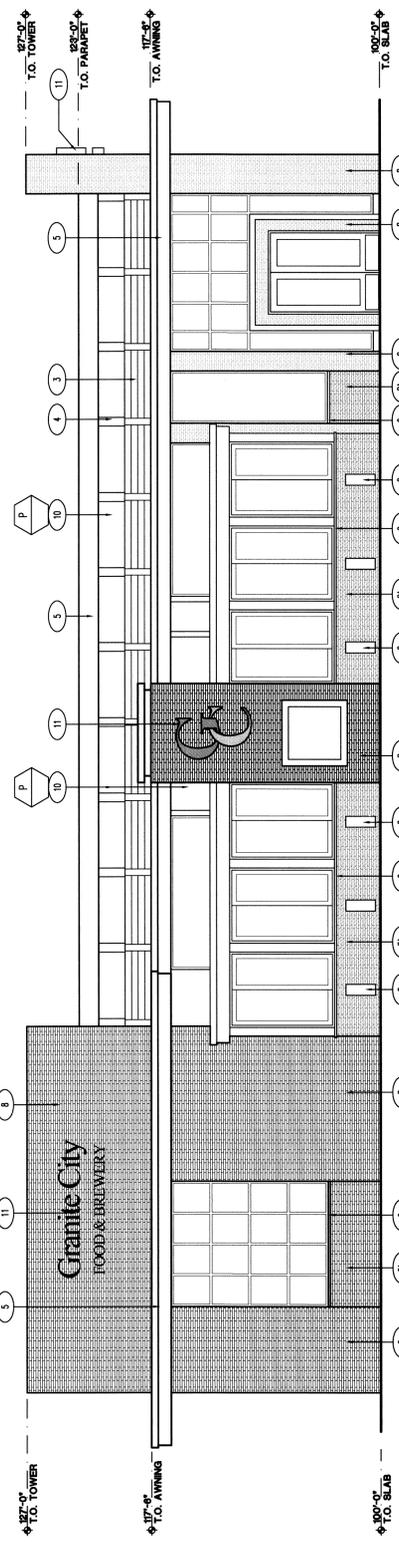
NO REVISION

PROJECT NUMBER
110215
 SHEET NUMBER
A210

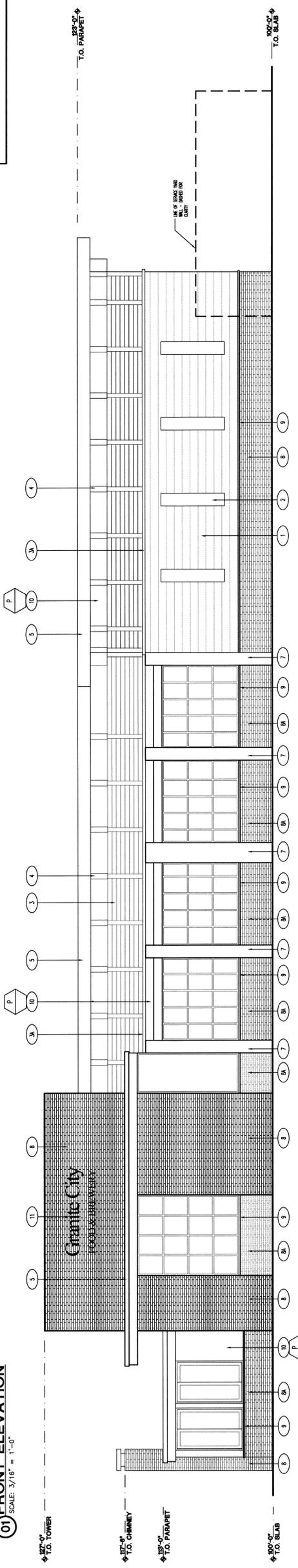
ORIGINAL ISSUE DATE - 6/3/2011

Exterior Elevation Notes

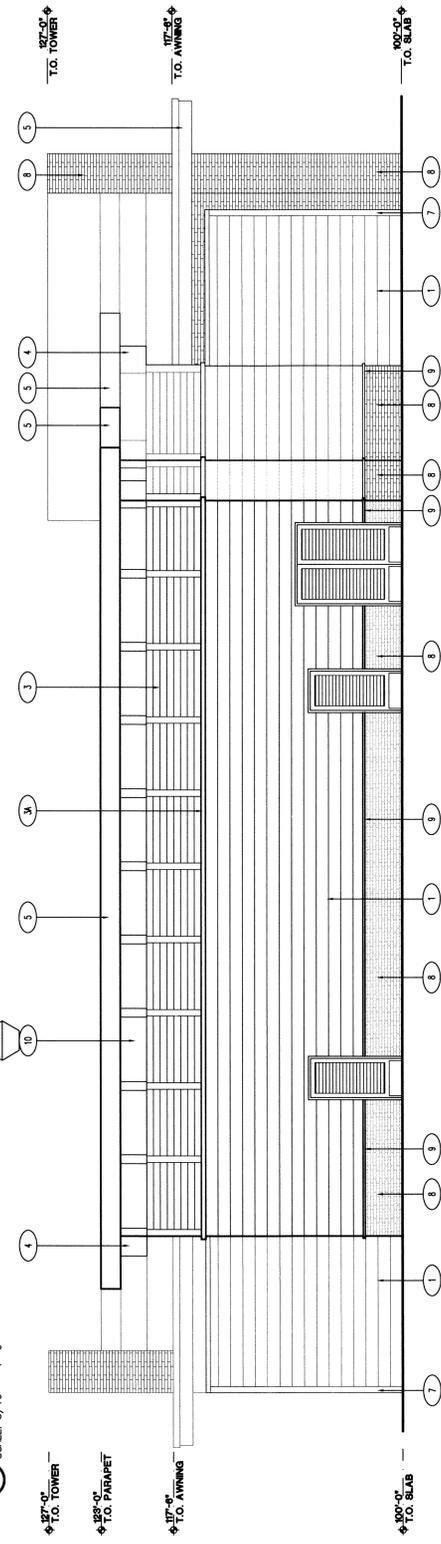
- 1 FINISH RECLAIMED TIMBER - 1 1/2" WIDE BY 4" HIGLING
 2x4S PERMANENTLY FASTENED TO CONCRETE FOUNDATION
 2x4S WHITE STAIN
- 2 BACK LIT DECORATIVE GLASS - FINISH FOR FINISH ACCESS
- 3 POWDER COATED ALUMINUM DECORATIVE SHUTTERS APPLIED OVER EIFS FINISH
- 3A POWDER COATED ALUMINUM TRIM - HORIZONTAL
- 4 GRANITE DECORATIVE OUTDOORS - 4000S SAWN LUMWOOD RECLAIMED TIMBER
 WOODEN GRILL, 1/2" X 1/2" SURFACE CLEANED AND FINISHED WITH 3 COATS
 COPPER METALLIC FINISH FASCIA AND UNDERSIDE OF SHUTTLE
- 5 STAINING SEAM METAL ROOF AND FASCIA
 1/2" X 1/2" W/ 1/4" BEARING TRIM COOL ROOF,
 COPPER ULTRAMET (A)
- 7 WAXED BRONZE ALUMINUM COING
- 8 EXTERIOR TILE FINISH
- 8A WAX TILE SERIES - SANDUSKI, PRODUCT - HL-RN/PS-3
- 8B WAX TILE SERIES - SANDUSKI, PRODUCT - HL-RN/PS-1
- 9 CONCRETE WATER TABLE
 COLOURED STONE - FRENCH GRAY, CS-1371
- 10 EIFS, PAINT PER DESCRIPTION
- 11 SHIMMER BY OTHERS
- 12 WORK BY SUB CONTRACTOR



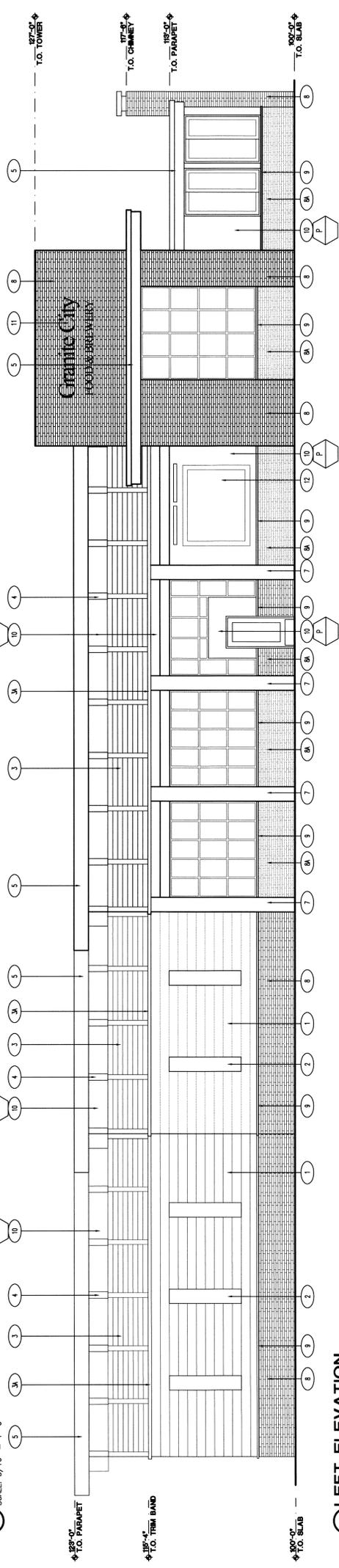
01 FRONT ELEVATION
 SCALE: 3/16" = 1'-0"



02 RIGHT ELEVATION
 SCALE: 3/16" = 1'-0"



03 REAR ELEVATION
 SCALE: 3/16" = 1'-0"



04 LEFT ELEVATION
 SCALE: 3/16" = 1'-0"

DATE: July 18, 2011
TO: Planning Commission
FROM: R. Brent Savidant, Planning Director
SUBJECT: SUSTAINABLE DEVELOPMENT CHECKLIST – Discuss Revised Document

The recently adopted Zoning Ordinance contains Sustainable Development provisions that promote environmentally sustainable and energy efficient design and development practices (see Section 12.01).

There are provisions identified throughout the Zoning Ordinance where the use of sustainable design measures may be used to satisfy, modify, or replace a specific requirement. Once prequalified as a Sustainable Design Project (SDP), the use of a sustainable design measure to satisfy a specific Ordinance requirement is authorized. Approval of a site plan with a modification permitted under this Section shall be considered the formal approval of the SDP status of the project.

This process requires the creation of an SDP checklist, separate from the Zoning Ordinance. A draft document was handed out to the Planning Commission for review and comment at the June 14, 2011 Regular meeting. The document was discussed by the Planning Commission at the July 12, 2011 Regular meeting. The previous draft was revised by adding language about other forms of renewable energy, clarifying that eligible brownfield sites need to be MDEQ brownfield sites, confirming that professional seals are not necessary at this stage, as well as correcting some minor grammatical errors.

Separate Rules and Procedures will be created for the Sustainable Design Review Committee. The Rules and Procedures will be adopted by the Committee.

A draft resolution for adoption of the SDP provisions is attached.

Please be prepared to discuss this item at the July 26, 2011 Regular meeting.

Attachment:
Draft Sustainable Development Checklist, dated July 18, 2011

cc: File/Sustainable Development Option

G:\Sustainable Development Option\PC Memo 07 26 11.docx

PROPOSED RESOLUTION
Adoption of Sustainable Development Checklist

Resolution # PC-2011-07-

Moved by:

Seconded by:

WHEREAS, The City of Troy Zoning Ordinance included a Sustainable Design Option, which is intended to promote environmentally sustainable and energy efficient design and development practices for the construction of new and the rehabilitation of existing buildings and sites within the City; and,

WHEREAS, Section 12.01 of the City of Troy Zoning Ordinance established the requirement of a separate Sustainable Design Project Checklist; and,

WHEREAS, The Planning Commission developed the Sustainable Design Project Checklist.

THEREFORE BE IT RESOLVED, The Planning Commission hereby adopts the Sustainable Development Checklist.

Yes:

Absent:

MOTION CARRIED/FAILED

City of Troy

Sustainable Development Checklist

Established by Section 12.01 of the City of Troy Zoning Ordinance

DRAFT

July 18, 2011

Adopted by the Troy Planning Commission on XXXXXX

TROY Sustainable Development Project Checklist

1. Summary

The purpose of the Sustainable Development Project (SDP) option is to encourage development and redevelopment in the City of Troy to incorporate features designed to minimize adverse impacts on the natural and built environment. The SDP option is established by Section 12.01 of the Zoning Ordinance. SDP status will empower applicants to seek a modification from certain elements of the Zoning Ordinance and receive benefits directly related to the sustainable features proposed for their project.

This SDP application includes a variety of areas within which a project can provide sustainable measures in exchange for regulatory flexibility. Once it has been determined that a project design has included measures which are directly related to and which mitigate for the modification sought by the applicant, Prequalified SDP status can be awarded by the Sustainable Development Review Committee (SDRC). There are 7 groups of potential measures provided which can be applied to a variety of areas within the Zoning Ordinance.

2. Zoning Ordinance Sections for which SDP status may be granted

The SDP process is voluntary, and may be applied to any application requiring site plan review under Section 8.02 of the Zoning Ordinance. This includes conventional projects requiring site plan review or special use approval. SDP projects may receive modifications from the Zoning Ordinance in the following six areas:

- A. Lot Coverage: For projects having SDP status, maximum lot coverage may be reduced in the R1-A through R1-C Districts, RT, MF, UR, CF, IB, OM, and RC Districts (Sections 4.06.D.5, 4.07.D.5, 4.08.D.6, 4.09.D.6, 4.11.D.3, 4.15.D.4, 4.17.D.5, 4.18.D.6,)
- B. IB Front Yard Parking: For projects having SDP status, Front yard parking may be permitted in the IB District (Section 4.15.D.3.a)
- C. One Family Cluster Density Bonus: SDP Status may be used as a qualifying factor for a dwelling unit density bonus in projects utilizing the One-Family Cluster Option (Section 10.04.D.2.a)
- D. One Family Cluster Dimensional Modifications: SDP Status may be used as a qualifying factor for dimensional requirement flexibility in projects utilizing the One-Family Cluster Option (Section 10.04.E.2)
- E. Landscaping Flexibility: All landscaping requirements within Section 13.02, Landscaping, may be modified for projects having SDP status. This includes greenbelt landscaping, screening, parking lot landscaping, and general

landscaping requirements (Section 13.02).

- F. Parking Requirement Deviations: Projects with SDP status are automatically eligible for a parking deviation if the measures proposed and the Prequalified SDP status is granted for measures directly related to the requested change in parking (Section 13.06.F).

3. Application Requirements and Administration

Figure 1: SDP Process Summary

Steps	
1	Applicant files an application seeking Prequalified SDP status for one of the purposes identified herein.
2	Zoning Administrator reviews the application to ensure that measures intended to satisfy the Prerequisites are proposed for the area of relief being sought, and that at least one qualifying measure is proposed for the area of relief being sought (Table 1)
3	The Sustainable Design Review Committee meets and considers the application within 30 days of the Zoning Administrator’s formal determination that the application is complete.
4	The Committee takes action on the request. If the Committee finds that the proposed measures will adequately offset the requested modification, the Committee shall grant the applicant Prequalified SDP status.
5	The project goes through the site plan approval process.
6	The SDP status is ratified by final site plan approval

Projects seeking SDP status shall meet the following criteria and prequalification:

- A. Application: The application for SDP status shall contain the following information:
 1. Applicant’s name, address, and telephone number. Professional seals are not required at the SDP application stage.
 2. Common description of the property and complete legal description.
 3. Dimensions of land, including width, length, acreage, and frontage.
 4. Existing zoning and current land use of the property under consideration and zoning and current land use of all adjacent properties.
 5. General location of all existing structures, roadways, and natural features.
 6. The general location of all proposed buildings, roadways, parking areas, and any other changes proposed to be made on the subject property.
 7. A specific list of proposed sustainable design measures being proposed with the following supporting information:
 - a. Any manufacturer information, such as specifications or cut sheets that detail the technology, attributes, and anticipated benefits of the features or equipment.

- b. Identification on the drawings providing information about the location, general design, and application of the sustainable design features being proposed.
 - c. A specific list of the areas within the Ordinance for which benefits are being sought with the SDP application.
 - d. A long-term maintenance plan documenting the proposed method of care for the measures being proposed.
- B. Prerequisites and Qualifying Measures: The application will first be reviewed by the Zoning Administrator to ensure that it specifically lists the benefits for which the application is being filed and demonstrates that the areas of the Ordinance for which an application is seeking or benefits are proportionally related to the SDP measures being proposed. *Every area of the Ordinance for which modification can be sought has at least one category of potential measures from which the applicant MUST select and incorporate sustainable design measures. These required sustainable design measure categories are Prerequisites.*

For instance, if an applicant wishes to provide less open space (exceeding lot coverage) than is required by the Ordinance, the categories of measures identified as Prerequisites include measures that would mitigate the negative consequences of providing insufficient open space. In this example, the applicant would be required to provide measures in each of the following areas of stormwater quantity control, stormwater quality control and reduction of heat island effect.

Every area of modification also has measure categories identified as Qualifying. Every project must, in addition to the Prerequisites, provide a measure in one Qualifying category. For instance, in the example above, in addition to providing measures in the Prerequisite categories (stormwater quantity control, stormwater quality control and reduction of heat island effect), they would also be required to provide a measure in one of the following Qualifying areas: redevelopment and reuse, brownfield redevelopment, light pollution reduction, or water recycling.

- C. Sustainable Design Review Committee: Within 30 days of the Zoning Administrator's formal determination that the application is complete, the Committee shall review any application that has been determined to meet the minimum required criteria for application for SDP status and has met the prerequisite standard of proposing measures directly related to the area or areas from which the applicant is seeking modification. The Committee will review the proposal and each proposed measure and requested modification contained in the application. If the Committee finds that the proposed measures will adequately offset the requested modification, the Committee shall grant the application Prequalified SDP status.

- D. Compliance: Throughout the course of site plan or special use approval, the SDP application and findings of the Sustainable Design Review Committee shall be contained in the application. These materials will be reviewed throughout the process by the Zoning Administrator or designee for compliance to Prequalified SDP status. The applicant shall enjoy SDP benefits or modification as outlined in the Prequalified SDP application approved by the Committee. Once a project is complete, the Zoning Administrator shall make a determination that the Committee's findings are confirmed. If a change to the project affects the conditions spelled out in the Prequalified SDP findings, the applicant shall lose the benefits provided by the SDP status or shall reappear before the Committee to request a revised prequalification.

- E. Prequalified SDP status shall become permanent when the Zoning Administrator grants final site plan approval, at which time the project is determined to have achieved full SDP status. The measures and modifications approved as part of the full SDP status are, like any element contained within an approved site plan, a required element of that final site plan and must be adhered to.

4. Sustainable Design Measures

The SDP option provides for seven areas where an applicant can provide sustainable design measures to seek flexibility in the six areas noted in Section 2, above. It is incumbent upon the applicant to devise an application submission demonstrating that the measure is met. The measures may be applied to the area of regulatory flexibility as follows in Table 1.

Table 1: Prerequisite and Qualifying Measures

P = Prerequisite. To obtain Prequalified SDP status, a project MUST include measures in the categories identified as a Prerequisite, below. (Example: Lot Coverage flexibility can only be granted if stormwater quality, stormwater quantity, heat island effect, and water efficient landscaping measures are proposed.)

Q = Qualifying. This measure will qualify as a supporting measure to achieve SDP status for the area under consideration for modification. These options help mitigate the potentially negative factors resulting from the requested modification. Every project qualifying for SDP status must provide at least one Qualifying measure in addition to the Prerequisites for the area of modification.

X = Indicates that this measure will not satisfy the requirements to achieve SDP status.

	A		B		C		D	E	F			G			
Category	Stormwater		Site Selection		Transportation		Light Pollution	Heat Islands	Water Resources			Renewables			
	Quality	Quantity	Redevelopment and Reuse	Brownfields	Alternative Fuel Vehicle Facilities	Commuter			Water Efficient Landscaping	Water Use Reduction	Water Recycling	Solar	Wind	Geothermal	Other
Lot Coverage	P	P	Q	Q	X	X	Q	P	P	X	Q	X	X	X	X
IB District Front Yard Parking	P	P	Q	Q	Q	Q	P	Q	Q	X	Q	X	X	X	X
One Family Cluster Density Bonus	P	P	X	X	Q	Q	P	Q	Q	Q	Q	Q	Q	Q	Q
One Family Cluster Dimensional Flexibility	P	P	X	X	Q	Q	P	Q	Q	Q	Q	Q	Q	Q	Q
Landscaping Flexibility	P	P	X	X	X	X	X	Q	P	Q	Q	X	X	X	X
Parking Requirement Deviations	Q	Q	Q	Q	P	P	P	Q	X	X	X	X	X	X	X

A. Stormwater

Urban development has complicated and, in many cases, impeded the natural cycle of our water resources. By introducing impervious surfaces on a large scale the recharging of groundwater, infiltration of stormwater into the landscape, and flow and volume of rivers and streams have been disrupted. Further, contaminants from automobiles, chemicals from industry, eroded soils, and other undesirable substances have become commonplace, and are frequently washed away with stormwater into the natural environment. By improving the way stormwater is managed on-site, development can mitigate these potentially negative consequences. Low Impact Design techniques reduce the quantity of stormwater leaving a site, and also improve the quality of that water.

Stormwater Quantity

To receive Prequalified SDP status for stormwater quantity measures, an applicant may propose to do the following, or additional measures not specifically listed here, provided that the applicant can demonstrate that similar benefits will be realized:

- RAIN GARDENS
- SWALES
- MANUFACTURED WETLANDS
- GREEN ROOF
- CISTERNS
- PERMEABLE PAVING
- PRESERVATION OF NATURAL AREAS BEYOND WHAT IS REQUIRED

Stormwater Quality

To receive Prequalified SDP status for stormwater quality measures, an applicant may propose to do the following, or additional measures not specifically listed here, provided that the applicant can demonstrate that similar benefits will be realized:

- RAIN GARDENS
- SWALES
- MANUFACTURED WETLANDS
- GREEN ROOF
- CISTERNS
- PERMEABLE PAVING
- PRESERVATION OF NATURAL AREAS BEYOND WHAT IS REQUIRED

B. Site Selection

Renovation of an existing building or site is often more sustainable than new construction. The renovation of existing facilities reduces landfill waste and reduces the need for new materials. Also, the renovation of existing facilities often eliminates the need for changes to underground utilities, access and circulation, and open space, given that building footprints are often preserved. These advantages mean that redevelopment properties can often be revitalized more quickly, efficiently, and sustainably than new construction.

Brownfield projects are often situated in excellent, high-traffic or well developed areas, although in most brownfield cases, the site is environmentally contaminated. This is a disadvantage to the developer in that there is often costly mitigation that must occur in order to make the site useful. Using SDP, the City can incentivize brownfield redevelopment.

Redevelopment and Reuse

To receive Prequalified SDP status for redevelopment and reuse measures, an applicant may propose to do the following:

- USE A SITE THAT IS PREVIOUSLY DEVELOPED AND VACANT

Brownfield Site

To receive Prequalified SDP status for brownfield site measures, an applicant may propose to do the following:

- USE A SITE ON WHICH CONTAMINATION EXISTS AT CONCENTRATIONS IN EXCESS OF THE STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY'S (MDEQ) REMEDIATION CRITERIA OF PART 201, ENVIRONMENTAL REMEDIATION, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED. THIS DETERMINATION MUST BE MADE IN WRITING BY THE MDEQ.

C. Transportation

Purpose:

Electric, hybrid, natural gas, fuel cell, or other alternative fuel vehicles help reduce greenhouse gas emission and fuel demands. Supporting these vehicles also encourages innovation and job creation in the automotive industry, thereby supporting job growth in Troy and Southeast Michigan. The infrastructure for alternative fuel vehicles is in its infancy, although a few simple elements can be incorporated into new development and redevelopment to empower adopters of new automotive technology to function in Troy. This approach will also help Troy compete for residents and companies that are attracted to this aggressive approach to promoting new technology.

Beyond alternative fuel vehicles, the community realizes even more benefit from those who choose transit or non-motorized means to get to the homes, jobs, and everyday activities. Successful regional transit will allow a wider range of people to choose Troy as a home or destination. Non-motorized transportation has both an environmental and overall community health benefit. Both options increase the number of pedestrians on the street, supporting the density in certain areas that are called for in the City of Troy Master Plan.

Alternative Fuel Vehicle Facilities

To receive Prequalified SDP status for alternative fuel vehicle measures, an applicant may propose to do the following:

- INSTALL RECHARGING STATIONS FOR NOT LESS THAN 2.5% OF THE PROVIDED PARKING SPACES
- INSTALL PRIORITY PARKING FOR HYBRID OR ALTERNATIVE FUEL VEHICLES FOR NOT LESS THAN 5% OF THE PROVIDED PARKING SPACES

Commuter Accommodations

To receive Prequalified SDP status for commuter measures, an applicant may propose to do the following:

- PROVIDE NON-MOTORIZED PATHWAYS AND BICYCLE AMENITIES THROUGHOUT THE PROJECT BEYOND THOSE REQUIRED BY THE ORDINANCE
- PROVIDE COMMUTER LOCKERS AND SHOWERS AND SECURE, COVERED BICYCLE PARKING FOR NOT LESS THAN 10% OF THE ESTIMATED STAFF OR RESIDENTS AND 5% OF THE ANTICIPATED CUSTOMERS
- PROVIDE COVERED SHELTER FOR TRANSIT PASSENGERS ON ESTABLISHED TRANSIT ROUTES

D. Light Pollution

Purpose:

Light pollution takes many forms, and can have many negative consequences. Simple problems, like trespass of excess light from one property to another, can be a nuisance. Substantial light pollution can create glare that makes night visibility for drivers a challenge. Regional light pollution can limit the ability to see the night sky clearly, and inappropriate light levels have been shown to affect sleep behavior. Further, by reducing unnecessary lighting, there is an energy reduction benefit that, on a widespread scale, can significantly reduce energy demand.

Light Pollution Reduction Measures

To receive Prequalified SDP status for light pollution reduction measures, an applicant may propose to do the following:

- REDUCE PROVIDED LIGHTING BY USING AUTOMATIC DEVICES FOR ALL NON EMERGENCY LIGHTING BY AT LEAST 50% BETWEEN 11 PM AND 5 AM AND HAVE FULL CUTOFF SHIELDING ON ALL FIXTURES TO PREVENT LIGHT TRESPASS

E. Heat Islands

Purpose:

Heat island effect is when atmospheric temperatures, indoors or outdoors, are artificially increased by elements of the built environment. For instance, a large expanse of asphalt absorbs and slowly releases heat throughout a parking area, where an expanse of grass would have remained cooler and avoided such an “island” of increased heat.

Techniques such as a high-reflectivity roof, sun shades, increased landscaping over a large parking area, or the use of a light, highly reflective pavement material can reduce the heat island effect and help maintain more comfortable temperatures that are closer to the natural condition on a site. These techniques reduce energy demands and naturally preserve comfort for the people who visit or reside in such places.

Heat Island Effect Reduction

To receive Prequalified SDP status for heat island effect measures, an applicant may propose to do the following:

- PLACE A MINIMUM OF 50% OF PARKING UNDERGROUND OR UNDER A STRUCTURE HAVING A ROOF SRI (SOLAR REFLECTANCE) OF AT LEAST 29 OR A STRUCTURE HAVING A GREEN ROOF
- SHADE 50% OR MORE OF THE SITE HARDSCAPE (PARKING, DRIVES, WALKS, COURTS, ETC., NOT INCLUDING BUILDINGS) WITH ANY OF THE FOLLOWING ALONE OR IN COMBINATION:
 - USE AN OPEN GRID PAVEMENT SYSTEM
 - LANDSCAPING CANOPY (WITHIN 5 YEARS OF PLANTING)
 - SOLAR ENERGY STRUCTURES
 - USING A STRUCTURE HAVING A ROOF SRI OF AT LEAST 29 OR A STRUCTURE HAVING A GREEN ROOF
 - USE HARDSCAPE MATERIALS WITH AN SRI OF AT LEAST 29
- USE ROOFING MATERIALS WITH AN SRI OF AT LEAST 29 (FOR ROOFS WITH A STEEP SLOPE – GREATER THAN 2:12) OR AT LEAST 78 (FOR ROOFS WITH A LOW SLOPE – EQUAL TO OR LESS THAN 2:12) FOR AT LEAST 75% OF THE ROOF SURFACE AREA.
- USE A GREEN ROOF FOR AT LEAST 75% OF THE ROOF SURFACE AREA.
- USE A COMBINATION OF THE MINIMUM SRI ROOF MATERIALS AND GREEN ROOF MATERIALS FOR AT LEAST 75% OF THE ROOF SURFACE AREA

F. Water Resources

Purpose:

While the State of Michigan is surrounded by the Great Lakes, most communities obtain their water from groundwater sources. Given the effect of urban development on the

natural recharging of groundwater, there is a benefit in many communities to reduce the amount of water used for everyday activities. Even in Troy, the cost of bringing water in through the regional water network is considerable in terms of the long-term demands placed on the network of underground utilities. By reducing the amount of water wasted in everyday use, the community will extend the useful life of its water resources and the water infrastructure.

Using water efficient landscaping, such as drought tolerant native species, reduces the need for water and maintenance costs. Reducing water use inside a building at the point of consumption is easily achieved through water efficient fixtures. Water recycling is often more involved, but has the added benefit of reducing stormwater quantity, in keeping with other measures within the SDP process.

Water Efficient Landscaping

To receive Prequalified SDP status for water efficient landscaping measures, an applicant may propose to do the following:

- REDUCE WATER CONSUMPTION DEMANDS FOR IRRIGATION BY MORE THAN 50% USING NATIVE SPECIES OVER CONVENTIONAL LANDSCAPING
- INSTALL IRRIGATION SYSTEMS USING ONLY CAPTURED RAINWATER OR RECYCLED WASTEWATER

Water Use Reduction

To receive Prequalified SDP status for water use reduction measures, an applicant may propose to do the following:

- REDUCE WATER CONSUMPTION BY 20% OR MORE OVER CONVENTIONAL DESIGN BY USING WATER EFFICIENT TOILETS (DUAL FLUSH, WATERLESS, LOW FLOW, ETC.), LOW FLOW FAUCETS, LOW FLOW SHOWERS, HIGH-EFFICIENCY WASHING MACHINES OR DISHWASHERS, ETC.

Water Recycling

To receive Prequalified SDP status for water recycling measures, an applicant may propose to do the following:

- CAPTURE MORE THAN 50% OF THE SITE'S WASTEWATER FOR NON-POTABLE USES

G. Renewables

Purpose:

Renewable sources of energy, such as wind, solar, or geothermal, represent cleaner, reliable sources of energy that do not place the same kind of long-term demands on the natural environment that are characteristic of fossil fuels. While not always ideally suited to the climate or condition present in every region or even specific property, renewable sources of energy do represent inexhaustible sources of energy. Solar power, for instance, can generate electricity or provide thermal energy to heat water or even to warm the air inside a building. Geothermal energy takes advantage of the reliable consistent temperatures within the soil beneath our feet. Wind power can enhance the electrical supply without any need for fuel. Other forms of renewable energy production may be proposed, subject to approval by the Committee.

Renewable energy represents a large potential growth area in the economy. By incentivizing the installation of renewable capacity, the City of Troy is also supporting job creation in manufacturing, research and development.

Solar

To receive Prequalified SDP status for solar energy measures, an applicant may propose to do the following:

- PROVIDE ON-SITE SOLAR ENERGY COLLECTORS OR SOLAR THERMAL SYSTEMS TO PRODUCE NOT LESS THAN 10% OF THE SITES ANTICIPATED ELECTRICITY USE AND/OR REDUCE THE LOAD FOR WATER HEATING BY NOT LESS THAN 50% FOR SOLAR THERMAL DEVICES.

Wind

To receive Prequalified SDP status for wind energy measures, an applicant may propose to do the following:

- PROVIDE ON-SITE WIND ENERGY CONVERSION SYSTEMS TO PRODUCE NOT LESS THAN 10% OF THE ANTICIPATED ELECTRICITY USEAGE.

Geothermal

To receive Prequalified SDP status for geothermal energy measures, an applicant may propose to do the following:

- PROVIDE ON-SITE GEOTHERMAL SYSTEM REDUCE THE LOAD FOR BUILDING HEATING AND COOLING BY NOT LESS THAN 50%.

Other

To receive Prequalified SDP status for renewable energy measures not listed here, an applicant may propose to do the following:

- PROVIDE INSTALLED RENEWABLE ENERGY PRODUCTION CAPACITY NOT LESS THAN 10% OF THE ANTICIPATED ELECTRICITY USAGE OR TO REDUCE THE LOAD FOR BUILDING HEATING AND COOLING BY NOT LESS THAN 50%

4. Definitions

- Alternative Fuel Vehicles- Motorized vehicles that use an energy source other than gasoline, or a combination of gasoline and another form of energy
- Bicycle Amenities- Services provided that make the use of bicycles more use friendly, such as covered storage, bike racks, pathways etc.
- Brownfield- Abandoned, idle, or under-used industrial and commercial properties where expansion or redevelopment is hindered or complicated by real or perceived environmental conditions (SEMCOG 2008)
- Captured Rainwater – Rainwater collected in rain barrels or cisterns for later use
- Cisterns- Containers that store large quantities of stormwater above or below ground (SEMCOG 2008)
- Contaminants- Pollutants which have negative effects the natural environment, sometimes being washed away by stormwater into the environment.
- Drought Tolerant – Plants that do not normally require artificial irrigation
- Glare- An effect of light pollution which causes decreased visibility
- Greenhouse Gas- A gas which is trapped within the atmosphere creating a heating effect on the environment, called the Greenhouse Effect
- Green Roof- A rooftop system that may include vegetation, waterproofing, insulation, fabrics, growth media, and other synthetic components allowing the roof to slow the rate of stormwater runoff (SEMCOG 2008)
- Groundwater- Natural water bearing subsurface layers of porous stone, sand, gravel, silt or clay via infiltration (SEMCOG 2008)
- Full Cutoff Shielding- A buffer used to block light from an affected area
- Hardscape- Paved surfaces such as parking lots, driveways, sidewalks, courts etc. not including buildings
- Heat Island Effect- When atmospheric temperatures, indoors or outdoors, are artificially increased by elements of the built environment
- High-Reflectivity Roof-- A type of roofing used to decrease the effects of the urban heat island, by reflecting heat that would otherwise be absorbed
- Impervious Surfaces- A surface that prevents the infiltration of water into the ground such as roofs, streets, sidewalks, driveways, parking lots, and highly compacted soils (SEMCOG 2008)
- Light Pollution- Pollution caused by light, in the form of excess light or the causation for a nuisance
- Low Impact Design- Site design and stormwater management techniques that

infiltrate, filter, store, evaporate, and detain runoff close to its source, and that result in maintaining a site's pre-settlement hydrology (Troy Zoning Ordinance, 2011)

- Manufactured Wetlands- A man-made wetland used to create more efficient systems of water run-off and retention
- Native Species- Plants that historically co-evolved with the local ecology, geology and climate (SEMCOG 2008)
- Permeable Paving – Paving that allows liquids to pass through (SEMCOG 2008)
- Prerequisites- The sustainable design measures that must be met before an application can be approved.
- Qualifying Measures- Measures that need to be met in addition to the prerequisites in order for a sustainable design project to be considered
- Rain Gardens- Landscaping that provides on-site detention, filtering of rainwater, groundwater recharge, and helps reduce runoff volume (Troy Master Plan, 2008).
- Recharging Stations- Stations that can be used to recharge alternative fuel vehicles requiring electricity
- Renewable Energy Installations – Equipment or structures that are designed to capture energy generated from natural resources such as sunlight, wind, rain, tides, and geothermal heat, which are renewable (naturally replenished)
- SRI (Solar Reflectance Index)- The amount of solar energy reflected off of a surface measured by the Solar Reflectance Index http://eetd.lbl.gov/coolroof/ref_01.htm
- Stormwater- Water consisting of precipitation runoff or snowmelt (SEMCOG 2008)
- Stormwater quantity- The amount of stormwater runoff
- Stormwater quality- The condition of the stormwater, including the amount of contaminants
- Swales- A shallow stormwater channel that can be vegetated with some combination of grasses, shrubs, and/or trees designed to slow, filter, and often infiltrate stormwater runoff (SEMCOG 2008)
- Water Efficient Landscaping- Landscaping which effectively processes water in the most efficient manner possible, reducing negative effects of poor stormwater management
- Water Recycling – The reuse of water from common domestic applications
- Watershed- The geographic area that drains to a specific watercourse outlet. The watershed for a major river may encompass a number of smaller sub-watersheds that ultimately contribute to their common outlet (SEMCOG 2008).