



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

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

John J. Tagle, Chair, Donald Edmunds, Vice Chair
Michael W. Hutson, Edward Kempen, Tom Krent, Philip Sanzica
Gordon Schepke, Robert Schultz and Thomas Strat

September 24, 2013

7:00 P.M.

Council Board Room

1. ROLL CALL
2. APPROVAL OF AGENDA
3. MINUTES – September 10, 2013 Regular Meeting
4. PUBLIC COMMENT – For Items Not on the Agenda
5. ZONING BOARD OF APPEALS (ZBA) REPORT
6. DOWNTOWN DEVELOPMENT AUTHORITY (DDA) REPORT
7. PLANNING AND ZONING REPORT

POSTPONED ITEM

8. SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 409) – Proposed Faith Lutheran Church, West side of Dequindre, North of Big Beaver (37635 Dequindre), Section 24, Currently Zoned R-1D (One Family Residential) District

PLANNED UNIT DEVELOPMENT REVIEW

9. PUBLIC HEARING - PLANNED UNIT DEVELOPMENT KILMER PLACE (File Number PUD 10-A)
– Proposed Revision to Concept Development Plan and Preliminary Development Plan, Northeast Corner of Big Beaver and Kilmer (3088 Kilmer), Section 22, Currently Zoned PUD (Planned Unit Development #10) District

PRELIMINARY SITE PLAN REVIEW

10. PRELIMINARY SITE PLAN REVIEW (File Number SP 985) – Proposed Oakland Troy Senior Project, Southeast Corner of Square Lake and Adams, Section 20, Currently Zoned R-1A (One Family Residential) District

OTHER BUSINESS

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 Tagle called the Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on September 10, 2013 in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:

- Donald Edmunds
- Michael W. Hutson
- Tom Krent
- Philip Sanzica
- Gordon Schepke
- Robert Schultz
- Thomas Strat
- John J. Tagle

Absent:

- Edward Kempen

Also Present:

- Ben Carlisle, Carlisle/Wortman Associates, Inc.
- Allan Motzny, Assistant City Attorney
- Frank Boudon, Student Representative
- Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2013-09-069

- Moved by: Schultz
- Seconded by: Strat

RESOLVED, To approve the Agenda as prepared.

- Yes: All present (8)
- Absent: Kempen

MOTION CARRIED

3. APPROVAL OF MINUTES

Resolution # PC-2013-09-070

- Moved by: Edmunds
- Seconded by: Krent

RESOLVED, To approve the minutes of the August 27, 2013 Special/Study meeting as published.

- Yes: All present (8)
- Absent: Kempen

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

PRELIMINARY SITE PLAN REVIEW

5. PRELIMINARY SITE PLAN REVIEW (File Number SP 979 A) – Proposed Galleria of Troy Phase II, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

Mr. Carlisle reviewed the site plan application. He briefly addressed site planning deficiencies noted in his report dated September 4, 2013. Mr. Carlisle said of utmost importance is meeting the required 30 foot setback along Wilshire Drive and site access. He stated the applicant must provide written documentation that Magna is in agreement to sharing the private drive, or an additional access point on Wilshire would be needed.

Mr. Carlisle stated overall support of the conceptual development but recommended to postpone the item so the applicant can address specific site planning issues and architectural details to the satisfaction of the Planning Commission.

James Butler of Professional Engineering Associates and Scott Bowers of Bowers & Associates were present to represent the applicant.

Mr. Bowers presented updated elevations, circulated sample materials and displayed various renderings. He addressed the enhanced architectural designs, site alternatives and integration between the hotel and restaurant developments.

After further discussion, no action was taken on the application. The applicant agrees to work with the Planning staff on the site planning issues and architectural designs and come back to the Planning Commission with revisions at a future date.

OTHER BUSINESS

6. PUBLIC COMMENTS – For Items on Current Agenda

There was no one present who wished to speak.

7. PLANNING COMMISSION COMMENTS

There were no comments.

The Regular meeting of the Planning Commission adjourned at 7:52 p.m.

Respectfully submitted,

John J. Tagle, Chair

Kathy L. Czarnecki, Recording Secretary

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DATE: September 17, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 409) – Proposed Faith Lutheran Church, West side of Dequindre, North of Big Beaver (37635 Dequindre), Section 24, Currently Zoned R-1D (One Family Residential) District

The petitioner Faith Lutheran Church submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for the addition to the Youth Center, a detached Recreation Building and sports fields. The application was considered by the Planning Commission at the July 23, 2013 Special/Study meeting and postponed to September 24, 2013 to provide time for the applicant to revise the site plan and address issues raised at the meeting.

The applicant revised the site plan to reflect comments made by neighbors and the Planning Commission.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the application. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and recommends approval of the project, as noted.

Attachments:

1. Maps
2. Minutes from July 23, 2013 Planning Commission Special/Study meeting.
3. Report prepared by Carlisle/Wortman Associates, Inc.
4. Public Comment

cc: Applicant
File/ SU 409

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PROPOSED RESOLUTION

SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 409) – Proposed Faith Lutheran Church, West side of Dequindre, North of Big Beaver (37635 Dequindre), Section 24, Currently Zoned R-1D (One Family Residential) District

Resolution # PC-2013-09-

Moved by:

Seconded by:

RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the improvements proposed for Faith Lutheran Church, West side of Dequindre, North of Big Beaver (37635 Dequindre), Section 24, Currently Zoned R-1D (One Family Residential) District be (granted, subject to the following conditions):

1. Show the 6-foot high wall from Auburn Drive property to the 40-foot setback on Dequindre Road on the final site plan.
2. Hours of field use are limited to no later than 9:00 p.m.

_____) or

(denied, for the following reasons: _____) or

(postponed, for the following reasons: _____)

Yes:

No:

Absent:

MOTION CARRIED / FAILED



Legend:

Form Based Zoning (Current)

- (PUD) Planned Unit Development
- (CF) Community Facilities District
- (EP) Environmental Protection District
- (BB) Big Beaver Road (Form Based)
- (MR) 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
- (MF) Multi-Family Residential
- (MHP) Manufactured Housing
- (UR) Urban Residential
- (RC) Research Center District
- (PV) Planned Vehicle Sales

631 0 315 631 Feet

Scale 1: 3,784

SPECIAL USE REQUEST AND PRELIMINARY SITE PLAN REVIEW

8. **PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (File Number SU 409)** – Proposed Faith Lutheran Church, West side of Dequindre, North of Big Beaver (37635 Dequindre), Section 24, Currently Zoned R-1D (One Family Residential) District

Mr. Carlisle reviewed the application seeking approval to add a youth center building, indoor recreation building and sports fields. He addressed the proposed screening to mitigate the potential impact on adjacent residential. Mr. Carlisle said a late submittal of a tree inventory lists only types of existing trees; not size or quality. He said the history of previous proposals by the church reveals concerns from adjacent neighbors for the loss of wooded areas within and to the periphery of the site. Mr. Carlisle said consideration should be given whether the preservation of the tree “collar” around the perimeter, or the installation of a wall and new trees, would better mitigate potential impact on adjacent neighbors.

Mr. Carlisle asked the applicant to address the issues cited in his report dated July 11, 2013 prior to the Planning Commission granting Preliminary Site Plan and Special Use approval.

Mr. Savidant said the department received four written correspondences in general opposition of the proposed application. He noted also that the petitioner submitted correspondence relating to the species of trees on site.

There was brief discussion on:

- Environmental protection of area.
- Wall and landscape screening as relates to Zoning Ordinance requirements.

The petitioner, Joseph Casiglia, and Nathan Robinson, the project engineer, were present.

Mr. Casiglia said they propose to continue the existing style of boundary for continuity around the entire perimeter of the property. Mr. Casiglia said there are a number of residential fences along the northern border but not one continuous fence. He said the physical wall would provide protection for the users of the sports fields and adjacent residents.

PUBLIC HEARING OPENED

Richard Beltz, 2422 Kingsbury, present to represent son David Beltz of 3373 Auburn and Mike Bobay of 3370 Auburn. He expressed concerns with the proposed masonry wall being so close to the side yard configurations of the homes on Auburn. Mr. Beltz circulated photographs and an alternative plan for the placement of the wall and landscaped screening.

Kevin Geyer, 2816 Majestic Court, voiced opposition to the masonry wall; he wants to preserve the existing trees and vegetation.

Carol Kiger, 37761 Dequindre, said the site plan does not show the wall and landscaping extending to her property, and asked if it should be. She addressed concerns with noise.

Charles Snell, 2987 Winter, asked the Board to grant approval of the plan as submitted this evening. Mr. Snell said he wanted trees preserved and a landscape buffer for the subdivision that went in behind his property, but the parcel was clear cut for construction.

Mike Bobay, 3370 Auburn, said the wall would have an adverse impact on his property value and recommended an alternate plan as suggested by Mr. Beltz.

Christina Beltz, 3373 Auburn, said she would like the trees to remain because they help buffer sound from various church activities.

PUBLIC HEARING CLOSED

Mr. Carlisle confirmed the petitioner is required to provide and the site plan must reflect the extension of the screening treatment to Dequindre. Mr. Carlisle addressed the differences of screening requirements for a site condominium development and a special use request.

Mr. Robinson said the intent is to clear cut the property and place a masonry wall on the church side of the property line. He addressed the existing tree types with respect to screening and stormwater management. He also addressed the church's desire for the wall as relates to safety and liability, particularly after the hours the sports fields would be used. Mr. Robinson said sports equipment would be mobile and stored in the recreation building when not in use. He said there would be no bleachers.

There was discussion on:

- Type of screening treatment; wall, landscape, combination of both.
- Effectiveness of wall, landscaping as sound barrier.
- Location, placement of wall; i.e., offset from property line; color of wall.
- Maintenance of area around wall if offset from property line.
- Protection of existing trees during construction.
- Aesthetics of area.

Chair Tagle advised the petitioner that a minimum of five affirmative votes are required for approval and with the absence of two Board members, a postponement could be requested until a full board is present.

Mr. Casiglia said he would like to proceed.

After a brief discussion, it was the consensus of the Board to postpone the item so the petitioner could come back with a revised site plan to address the items as discussed. They specifically asked the petitioner to provide additional landscaping for screening, provide a sample (cut sheet) of the masonry wall, submit a full tree survey and revise the site plan to show the full length of the masonry wall to the Dequindre.

Resolution # PC-2013-07-060

Moved by: Schultz

Seconded by: Krent

RESOLVED, To postpone the item to the September 24, 2013 Special/Study meeting.

Yes: All present (7)

Absent: Hutson, Schepke

MOTION CARRIED



CARLISLE

WORTMAN
associates, inc.

605 S. Main Street, Ste. 1
Ann Arbor, MI 48104

(734) 662-2200
(734) 662-1935 Fax

Date: July 11, 2013
September 17, 2013

Preliminary Site Plan and Special Use Review For City of Troy, Michigan

Applicant:	Joseph Casiglia
Project Name:	Faith Lutheran Church – Youth Center Addition, Recreation Building, and Sports Fields
Plan Date:	May 24, 2013 September
Location:	37635 Dequindre Road
Zoning:	R-1D, Single Family Residential
Action Requested:	Preliminary Site Plan and Special Use Approval

PROJECT AND SITE DESCRIPTION

The existing Faith Lutheran Church is seeking approval to add the following facilities to their site on Dequindre Road:

- A 4,000 sq/ft addition to their youth center building;
- A new 3,400 sq/ft indoor recreation building; and
- 2 volleyball courts, 2 soccer fields, 2 baseball fields, and 1 football field.

All improvements are located on the north side of the property. The area where the recreation building and fields are proposed is located on a parcel that was recently purchased by the church. The existing single-family home on this parcel will be demolished, and the existing curb cut on Dequindre will be removed. There are no proposed changes to the existing church building and the site's 764 space

parking lot. The applicant notes that the use of the fields is limited to church member only and will not be open to the general public. The applicant notes that the use of the youth center and recreation building will not be conducted during worship hours and thus the existing site parking can accommodate all existing and proposed uses on site. Places of Worship, and associated uses, are permitted in the R-1D District subject to Special Use approval. As set forth in Section 9.04, the Planning Commission may at its discretion impose additional conditions when it is determined that such increases in standards or additional conditions are required to achieve or assure compatibility with adjacent uses and/or structures or to implement the Master Plan.

Location of Subject Property

The property is located on the west side of Dequindre Road north of Big Beaver.



Size of Subject Property:

The overall size of the subject property is 18.8 acres.

Current Zoning:

The property is currently zoned R-1D, Single-Family Residential

Direction	Zoning	Use
North	R-1D, Single-Family Residential	Single-Family Residential
South	R-1E, Single-Family Residential	Single-Family Residential
East	City of Sterling Heights	Single-Family Residential

West	R-1D, Single-Family Residential	Single-Family Residential
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PREVIOUS PLANNING COMMISSION REVIEW

The Planning Commission first considered this matter at the July 24, 2013 meeting. Please review our July 11, 2013 memo for a complete site plan review.

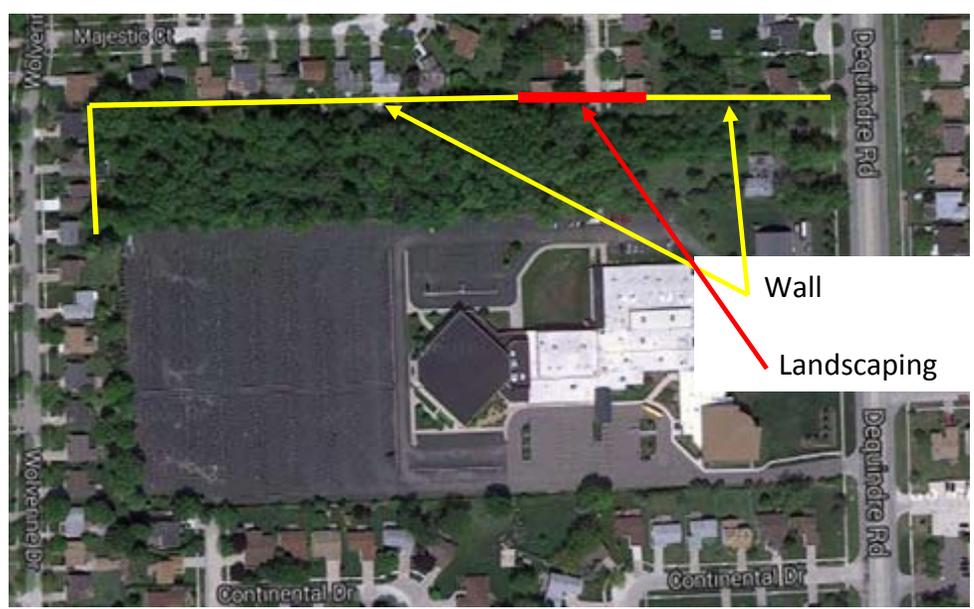
At the meeting, the Planning Commission and neighboring properties discussed:

- Type of screening treatment; wall, landscape, combination of both.
- Effectiveness of wall, landscaping as sound barrier.
- Location, placement of wall; i.e., offset from property line; color of wall.
- Maintenance of area around wall if offset from property line.
- Protection of existing trees during construction.
- Aesthetics of area

At the July 24th meeting, the application was continued so that the applicant was able to address the following items:

1. Revise Site Plan to Address Tree Preservation and Wall

Since the Planning Commission meeting, the applicant has worked with the neighborhood to address their concerns. Based on desire of the neighborhood, the applicant proposes a combination of a 6-foot high masonry wall and landscaping. The submitted tree preservation and landscape plan shows the proposed location of the wall. The only



break in the wall is along the property line adjacent to the properties on Auburn Drive. Those property owners desired landscaping instead of wall. Though not shown on the Plan, the applicant has agreed to continue the 6-foot high wall from the edge of the Auburn Drive properties to the 40-foot front yard setback on Dequindre Road.

Items to be Addressed: *Install 6-foot high wall from Auburn Drive property to the 40-foot setback on Dequindre Road.*

2. Preserve Trees to Provide “Collar” Between Fields and Wall

The applicant has submitted a tree survey. The applicant proposes to preserve a “tree collar” around between the fields and wall to serve as an additional buffer between the fields and adjacent neighbors. The applicant indicates that grading should not extend more than 25-feet from the edge of the fields.

Items to be Addressed: *None*

3. Hours of Operation

The applicant notes that game use of the fields are expected to occur on Saturdays from 9:00 a.m. to 6:00 p.m. Practices may occur any day of the week generally from 3:00 p.m to 9:00 a.m. The fields may be used by the preschool for recess between 9:00 a.m. to 3:00 p.m.

Within the purview of the Planning Commission for Special Uses, there may be a limitation placed on the hours of field use. Any restriction on the use of the fields must be reasonable in relation to the protection of public health, safety and welfare.

Items to be Addressed: *Limit hours of field use to no later than 9:00 p.m.*

4. Photometrics

The applicant has resubmitted fixtures that are fully shielded. The submitted photometrics and fixtures meet ordinance requirements.

Items to be Addressed: *None*

SPECIAL USE

Standards of Approval

Places of Worship, and associated uses, are permitted in the R-1D District subject to Special Use approval. For any special use, according to Section 9.02.D, the Planning Commission shall “...review the request, supplementary materials either in support or opposition thereto, as well as the Planning Department’s report, at a Public Hearing established for that purpose, and shall either grant or deny the request, table action on the request, or grant the request subject to specific conditions.”

Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

- 1. Compatibility with Adjacent Uses. The Special Use shall be designed and constructed in a manner harmonious with the character of adjacent property and the surrounding area. In determining whether a Special Use will be harmonious and not create a significant detrimental impact, as compared to the impacts of permitted uses.***

The proposed use of the property remains a place of worship. Provided that the applicant is able to address specific noted site planning, including extension of the wall, the expansion of the use of the property is compatible with adjacent uses. The applicant has made the necessary site plan

improvements including tree preservation, increased landscaping, and installation of a 6-foot wall to mitigate impact upon adjacent properties.

- 2. Compatibility with the Master Plan. The proposed Special Use shall be compatible and in accordance with the goals and objectives of the City of Troy Master Plan and any associated sub-area and corridor plans.***

The Master Plan designates the subject site and the surrounding area as single-family residential. The applicant is not altering the primary use of the property. The continuation of the existing use is compatible with the goals and objectives of the City of Troy Master Plan. Furthermore, a primary goal of the Master Plan is the preservation and protection of single-family neighborhoods. As noted, the applicant has made the necessary site plan improvements including tree preservation, increased landscaping, and installation of a 6-foot wall to mitigate impact upon adjacent properties.

- 3. Traffic Impact. The proposed Special Use shall be located and designed in a manner which will minimize the impact of traffic, taking into consideration: pedestrian access and safety; vehicle trip generation (i.e. volumes); types of traffic, access location, and design, circulation and parking design; street and bridge capacity and, traffic operations at nearby intersections and access points. Efforts shall be made to ensure that multiple transportation modes are safely and effectively accommodated in an effort to provide alternate modes of access and alleviate vehicular traffic congestion.***

The proposed use of the property remains a place of worship. Adding sports fields and a recreation building should not cause an increase in site traffic.

- 4. Impact on Public Services. The proposed Special Use shall be adequately served by essential public facilities and services, such as: streets, pedestrian or bicycle facilities, police and fire protection, drainage systems, refuse disposal, water and sewage facilities, and schools. Such services shall be provided and accommodated without an unreasonable public burden.***

There should not be any additional impact on other public services, such as police or utilities, beyond what would normally be experienced for like uses.

- 5. Compliance with Zoning Ordinance Standards. The proposed Special Use shall be designed, constructed, operated and maintained to meet the stated intent of the zoning districts and shall comply with all applicable ordinance standards.***

The site complies with all zoning ordinance standards.

- 6. Impact on the Overall Environment. The proposed Special Use shall not unreasonably impact the quality of natural features and the environment in comparison to the impacts associated with typical permitted uses.***

The applicant has submitted a tree survey. The applicant proposes to preserve a “tree collar” around between the fields and wall to serve as an additional buffer between the fields and adjacent neighbors. No other site natural features exist.

7. Special Use Approval Specific Requirements. The general standards and requirements of this Section are basic to all uses authorized by Special Use Approval. The specific and detailed requirements relating to particular uses and area requirements must be also satisfied for those uses.

The applicant has met all Special Use Specific Requirements.

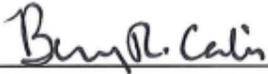
Items to be addressed: None.

RECOMMENDATION

We recommend Special Use approval and Preliminary Site Plan approval contingent upon the following conditions:

1. *Show the 6-foot high wall from Auburn Drive property to the 40-foot setback on Dequindre Road on the final site plan.*
2. *Hours of field use are limited to no later than 9:00 p.m.*

Sincerely,



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

#225-02-1317

Cc:

From: [C.A. Kiger](#)
To: [Planning; Carol](#)
Subject: Faith Lutheran Special Use Plans
Date: Tuesday, September 10, 2013 2:34:11 PM

My name is Carol Kiger.

Address: 37761 Dequindre, Troy 248 528-0016 carolkiger@prodigy.net

I have lived here for 34 1/2 years.

My property is on the north side of Faith Lutheran.

I am totally opposed to the church plans.

I have many concerns about Faith Lutheran's plans to develop that residential property as a business. My property value will most likely be lowered. All of the following will have a negative impact on my property value.

I have upstairs windows on the south side of my house and if the church plans are approved I will end up with a view of a building. I am planning on moving as soon as I find a suitable house to move to but it will be hard to sell my house with that kind of view as well as other problems that the church will most likely cause.

In their notes they say the property will be used only by church families and only at certain times. Of course once their plans are approved they will be able to use the property any time they want and they may even lease it out. I understand the city will not control that. The church is a business and the bottom line is profit.

At the last planning meeting I brought up that the planned masonry fence stopped at the back of my property and I wanted it next to my property. I currently have a chain link fence which is on my property and doesn't need to be removed. I was assured that the fence needs to go to Dequindre. The neighbor behind me and the one across the street from him did not want the fence next to their property. On the updated plans the masonry fence stops even farther back, I guess, to appease those neighbors. It looks the masonry fence is to be put across Auburn Rd but not next to our three properties. I don't understand why my neighbors wants are more important than mine or have anything to do with mine. There is no reason why the church cannot start the fence again at my property line and extend it to Dequindre. What they do next to the properties behind me should have nothing to do with my property. I need that fence to separate me from the screaming teenagers that will be playing volleyball next to my property. I have 260 feet of property line next to the church which is more than any of the other of the church's neighbors. Also my taxes are higher than each of those other neighbors. I have always paid my taxes in full and before the due date. If they do not put the fence all the way to Dequindre they should at least put it up to the front of my garage next to my chain link fence although I would like it all the way to Dequindre to discourage the unsupervised teenagers from vandalizing my vehicle parked in my driveway.

I have a book written by Norm Abrahams who used to be on 'This Old House'. He says the

only way to block the noise is to have a masonry fence taller than people. I am 5' 5" so a 6' should help block the noise from screaming teenagers when I am in my yard although some of them will be taller and will be jumping up higher than the fence but at least the fence should help some.

Games are played now behind the house that is going to be torn down. That is at least 160 feet from me when I am in my back yard. It is really loud. I cannot not see them because of all the trees and all the overgrowth but I sure can hear them. A masonry fence should cut down on that noise.

I don't like to sound negative but when the property next to mine was private property and the church developed the property next to theirs, my then neighbor had a lot of problems. She told me the church was definitely not a good neighbor. I am thinking I will probably have some of the same problems. The neighbor's house was broken into at least twice after the church developed the property next to them. I talked to a couple of church representatives after the last meeting and was met with deaf ears and sarcasm. I mentioned some of the problems my previous neighbor had because I thought they would be interested in my concerns. They told me to have her call the church. I repeated that not only was she the previous owner but is now dead. And they stared right through me and repeated 'Well just have her call the church'.

They said that they are not responsible for what happens on church property and the people that broke into the my previous neighbor's house were not affiliated with the church and did it after the church people had gone home. However my neighbor said one break-in was during the day when no one was home and she thought it was teenagers because all they stole was beer from the refrigerator.

Also my previous neighbor told me that the little kids playing in the church yard were not properly supervised and they would throw rocks and garbage over the fence.

And these were grade school and younger kids. The plans say the ones playing next to my property will be teenagers.

The plans do not indicate it but most of the trees next to my property are buckthorns. Also the plans say my back yard from the utility lines to the back property line is wooded. That is quite a stretch of the imagination to call my back yard wooded. It is more than 100 feet from the lines to my back fence and my yard is 82.6 feet wide. That is more than 8200 square feet and I mow it depending on the weather from sometime in April to sometime in November. So I guess I am wondering how accurate their site evaluation is.

Another problem that my previous neighbor had after the property next to her was developed was she ended up with a squishy side yard and a wet basement. The water table is high and during heavy rains and spring melting her sump pump would run 24 hours a day. There have been many nights in the spring when I would lie awake and listen to my sump pump cycle on and off every few minutes. I extended the over flow out six feet and that help some. I have never had my basement flood in the 34 1/2 years that I have been here. In the spring, the ducks swim in the property next to mine. In the previous plans I recall seeing something about storm water detention and connection to the existing storm

sewers. That is an awful lot of water that has to go somewhere and I cannot believe that there was some similar wording when the plans were submitted for developing the property that was next to my previous neighbors. But she still ended up with a wet basement. These are some of my concerns. I want the masonry fence and some assurance that I will not end up with a flooded basement. I am hoping that you will give some consideration to my concerns.

Sincerely, Carol Kiger



LOCATION MAP
SCALE: 1"=2000'

PROPERTY DESCRIPTION

PART OF THE SOUTHEAST 1/4 OF SECTION 24, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 24; THENCE NORTH 00 DEGREES 10 MINUTES 36 SECONDS EAST 1320.45 FEET ALONG THE EAST LINE OF SECTION 24; THENCE SOUTH 89 DEGREES 41 MINUTES 50 SECONDS WEST 60.00 FEET TO THE NORTH LINE OF "GOLDEN GATE SQUARE SUB." AS RECORDED IN LIBER 163, PAGES 9 AND 10 OF OAKLAND COUNTY RECORDS TO THE WESTERLY RIGHT-OF-WAY LINE OF DEQUINDRE ROAD (120 FEET WIDE) AND THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE NORTH LINE OF SAID "GOLDEN GATE SQUARE SUB." SOUTH 89 DEGREES 41 MINUTES 50 SECONDS WEST 1245.38 FEET TO THE NORTHWEST CORNER OF SAID "GOLDEN GATE SQUARE SUB." AND THE EAST LINE OF "BEAVER TRAIL SUB." AS RECORDED IN LIBER 130 OF PLATS, PAGES 35 AND 36 OF OAKLAND COUNTY RECORDS; THENCE NORTH 00 DEGREES 13 MINUTES 50 SECONDS EAST 659.41 FEET ALONG THE EAST LINE OF SAID "BEAVER TRAIL SUB." AND "BEAVER TRAIL SUB. NO. 2" AS RECORDED IN LIBER 134, PAGES 20-23 OF OAKLAND COUNTY RECORDS; THENCE NORTH 89 DEGREES 40 MINUTES 40 SECONDS EAST 1244.76 FEET ALONG THE SOUTH LINE OF SAID "BEAVER TRAIL SUB. NO. 2" TO THE WESTERLY RIGHT-OF-WAY LINE OF DEQUINDRE ROAD; THENCE SOUTH 00 DEGREES 10 MINUTES 36 SECONDS WEST 659.82 FEET ALONG THE WESTERLY RIGHT-OF-WAY LINE OF DEQUINDRE ROAD TO THE POINT OF BEGINNING.

SITE CRITERIA

PARCEL SUMMARY:
ADDRESS: 37635 DEQUINDRE ROAD
PARCEL ID NO.: 20-24-430-006
EXISTING ZONING: R-10 (SINGLE FAMILY RESIDENTIAL)
ADJACENT ZONINGS: R-10 (NORTH AND WEST), R-1E (SOUTH & S.W.)
GROSS AND NET SITE AREA: 821,230 S.F. (18.853 ACRES)

BUILDING & USE SUMMARY:
EXISTING & PROPOSED USE: PLACE OF WORSHIP (CHURCH)
TOTAL BUILDING FOOTPRINT AREA:
EXISTING CHURCH: 93,290 S.F. ±
EXISTING YOUTH CENTER: 3,814 S.F.
PROPOSED YOUTH CENTER ADDITION: 4,050 S.F.
PROPOSED RECREATION BUILDING: 3,440 S.F.
TOTAL BUILDING FOOTPRINT AREA = 104,594 S.F. (APPROX.)

SETBACK SUMMARY:
BUILDINGS & FIELDS: REQUIRED: PROVIDED:
FRONT: 50' 75.6' (MINIMUM, EXISTING)
REAR: 50' 50' (PROPOSED)
SIDE (NORTH): 50' 50' (PROPOSED)

SITE CRITERIA

PARKING SUMMARY:
SPACES REQUIRED: 1 SPACE FOR EACH 3 SEATS IN WORSHIP UNIT.
1400 SEATS / 3 = 467 SPACES
SPACES PROVIDED: 764 SPACES EXISTING.

NOTE: USE AND OCCUPATION OF THE RECREATION BUILDING AND YOUTH CENTER DOES AND SHALL NOT OCCUR DURING WORSHIP SERVICE TIME FOR THE MAIN CHURCH BUILDING. THE PARKING REQUIREMENTS SHOWN ABOVE ARE BASED ON THE MORE RESTRICTIVE SCENARIO OF OCCUPATION OF WORSHIP HALL DURING REGULAR SERVICE TIME.

LANDSCAPING SUMMARY:
LANDSCAPE OPEN SPACE REQUIRED: 20%
LANDSCAPE OPEN SPACE PROVIDED: 343,915 S.F./821,230 = 41.9%

LEGEND

- SECTION CORNER AS DESCRIBED
- FOUND MONUMENT AS NOTED
- SET 1/2" REBAR WITH CAP #46724
- UTILITY POLE
- TRAFFIC SIGNAL POLE
- UTILITY RISER
- LIGHT POLE
- SIGN POST
- FLAG POLE
- AIR-CONDITIONING UNIT
- SEWER MANHOLE
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
- END OF PIPE
- FIRE HYDRANT
- GATEWELL/WATER SHUTOFF
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING CONCRETE PAVEMENT TO REMAIN
- EXISTING DECIDUOUS TREE TO REMAIN
- EXISTING CONIFEROUS TREE TO REMAIN
- EXISTING DECIDUOUS TREE TO BE REMOVED
- BARRIER-FREE PARKING STALL
- PARKING STALL COUNT
- OVERHEAD LINES
- EXISTING SANITARY LINE
- EXISTING STORM LINE
- EXISTING WATER LINE
- EXISTING TREE LINE TO REMAIN
- EXISTING TREE LINE TO BE REMOVED

SHEET INDEX

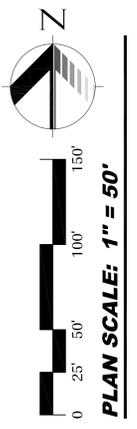
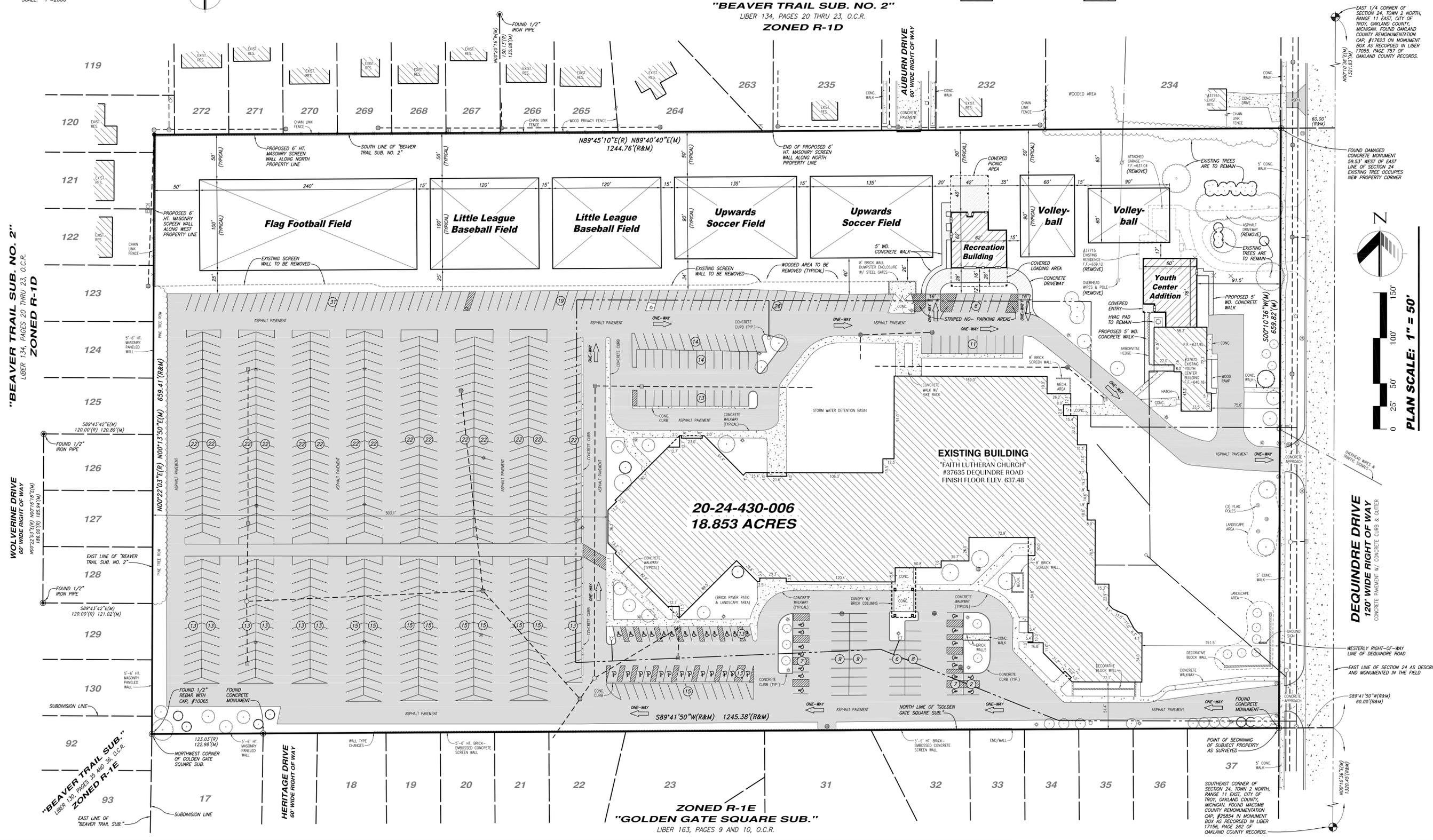
1. SITE PLAN.
2. TREE INVENTORY.
3. TREE PRESERVATION & LANDSCAPE PLAN.
4. PRELIMINARY GRADING & UTILITY PLAN.
5. SITE LIGHTING & PHOTOMETRIC PLAN.

SUPPLEMENTALS:
• TOPOGRAPHIC SURVEY.

REVISIONS:
6/17/13 REVISED PER PLANNING DEPT.
8/26/13 REVISED PER PLANNING COMMISSION.

CLIENT:
MR. DE CASCHIA
FAITH LUTHERAN CHURCH
MICHIGAN FOUND OAKLAND COUNTY REMONUMENTATION CAP. #17623 ON MONUMENT BOX AS RECORDED IN LIBER 17055, PAGE 757 OF OAKLAND COUNTY RECORDS.
(248) 444-8883
(248) 444-8248

JOB NO: 12-156
DATE: 5-24-13
DRAWN BY: N.P.R.



SCALE:

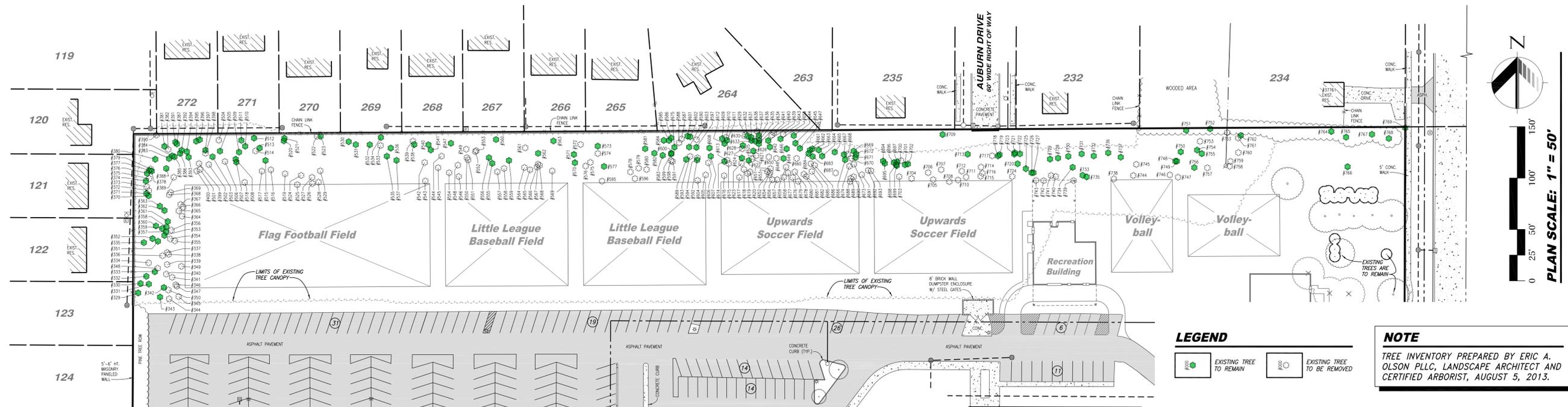
HORIZON
ENGINEERING LLC

CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING
P.O. Box 1827158, Shelby Township, Michigan 48318
Phone 586.453.8097 Fax 586.560.0053

PROJECT:
Faith Lutheran Church
#37635 DEQUINDRE ROAD
PARCEL NO. 20-24-430-006
PART OF THE SOUTHEAST 1/4 OF SECTION 24,
T.2N., R.1E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

PLANNING SHEET:
1 OF **5**

MUNICIPAL REVIEW NUMBERS:



LEGEND

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED

NOTE

TREE INVENTORY PREPARED BY ERIC A. OLSON PLLC, LANDSCAPE ARCHITECT AND CERTIFIED ARBORIST, AUGUST 5, 2013.

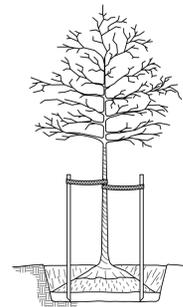
Tree #	d.b.h. (inches)	Secondary (stem)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated	Remove?	Tree #	d.b.h. (inches)	Secondary (stem)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated	Remove?	Tree #	d.b.h. (inches)	Secondary (stem)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated	Remove?
329	24		<i>Quercus spp.</i>	Oak (red family)	fair		N (size) NO	NO	514	15		<i>Acer saccharinum</i>	Silver Maple	good		N (species) NO	NO	684	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
330	11		<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	515	10		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	685	13		<i>Acer saccharinum</i>	Silver Maple	fair	- Epicormic branching	N (size) YES	YES
331	11		<i>Quercus spp.</i>	Oak (red family)	fair	- Epicormic branching	N (size) NO	NO	516	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	686	11		<i>Acer saccharinum</i>	Silver Maple	fair	- Crack in trunk	N (size) YES	YES
332	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species) NO	NO	517	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	687	9	7	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species) YES	YES
333	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	518	20		<i>Acer saccharinum</i>	Silver Maple	fair	- Declining	N (size) YES	YES	688	6		<i>Ulmus americana</i>	American Elm	fair	- Poor crotch and contorted crown	N (size) YES	YES
334	5	4	<i>Ulmus americana</i>	American Elm	fair	- Poor crotch	N (species) YES	YES	519	4		<i>Crataegus spp.</i>	Hawthorn	fair	- Rot in trunk	N (size) YES	YES	689	11		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES
335	12		<i>Quercus spp.</i>	Oak (red family)	dead		N (condition) YES	YES	520	14		<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	690	15	14/8	<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
336	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	521	8		<i>Tilia americana</i>	American Linden	fair	- Contorted crown	N (species) NO	NO	691	7		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
337	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	522	10	10	<i>Tilia americana</i>	American Linden	fair	- Poor crotch and contorted crown	N (species) NO	NO	692	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO
338	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	523	31		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	693	7		---	---	dead		N (condition) YES	YES
339	14		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	524	16		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	694	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO
340	4		<i>Crataegus spp.</i>	Hawthorn	good		N (size) YES	YES	525	5		<i>Ulmus americana</i>	American Elm	good		N (species) YES	YES	695	5	4/2	<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
341	9		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	526	17		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	696	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Contorted crown	N (size) YES	YES
342	12		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	527	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	697	6		<i>Ulmus americana</i>	American Elm	good		N (size) YES	YES
343	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species) NO	NO	528	7		<i>Ulmus americana</i>	American Elm	good		N (species) YES	YES	698	5		<i>Ulmus americana</i>	American Elm	good	- Contorted crown	N (size) YES	YES
344	9		<i>Ulmus americana</i>	American Elm	good		N (species) YES	YES	529	9		<i>Tilia americana</i>	American Linden	fair	- Leaning	N (size) YES	YES	699	6		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO
345	6		<i>Carya ovata</i>	Shagbark Hickory	good		N (size) YES	YES	530	14	4/3	<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	700	18	18	<i>Populus deltoides</i>	Cottonwood	fair	- Poor crotch	N (size) YES	YES
346	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	531	4		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	701	5		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO
347	4		---	---	dead		N (condition) YES	YES	532	15		<i>Carya ovata</i>	Shagbark Hickory	good		N (size) NO	NO	702	21		<i>Populus deltoides</i>	Cottonwood	fair	- Sparse crown	N (size) YES	YES
348	4		<i>Ulmus americana</i>	American Elm	fair	- Poor crotch	N (species) YES	YES	533	23		<i>Acer saccharinum</i>	Silver Maple	poor	- Severe rot throughout trunk	N (size) YES	YES	703	9		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES
349	18		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	534	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	704	5		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
350	8		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	535	10		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	705	6		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
351	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	536	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	706	7	3	<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
352	10		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Contorted crown	N (size) NO	NO	537	20		<i>Quercus spp.</i>	Oak (white family)	good		N (size) NO	NO	707	4		<i>Ulmus americana</i>	American Elm	good		N (species) YES	YES
353	18		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	538	15		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	708	14	12/8	---	---	dead		N (condition) YES	YES
354	5		<i>Acer rubrum</i>	Red Maple	good		N (size) YES	YES	539	13	12	<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Poor crotch	N (size) YES	YES	709	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO
355	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	540	14	4	<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	710	4		<i>Ulmus americana</i>	American Elm	good		N (size) YES	YES
356	17		<i>Acer saccharinum</i>	Silver Maple	poor	- Nearly dead	N (size) YES	YES	541	18		<i>Acer saccharinum</i>	Silver Maple	fair	- Leaning	N (size) NO	NO	711	11		<i>Ulmus americana</i>	American Elm	good		N (size) YES	YES
357	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	542	10		<i>Acer saccharinum</i>	Silver Maple	good		N (condition) YES	YES	712	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
358	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size) NO	NO	543	18		<i>Acer saccharinum</i>	Silver Maple	poor	- Top missing	N (size) YES	YES	713	10	7	<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
359	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	544	8	4	<i>Tilia americana</i>	American Linden	fair	- Fallen tree(s) leaning on it	N (size) YES	YES	714	5		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
360	7		<i>Crataegus spp.</i>	Hawthorn	good		N (size) NO	NO	545	11		---	---	dead		N (condition) YES	YES	715	7		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
361	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species) NO	NO	546	21		<i>Acer saccharinum</i>	Silver Maple	poor	- Severe decline	N (size) YES	YES	716	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
362	5		<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	547	5	4	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species) NO	NO	717	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Leader missing	N (size) YES	YES
363	4		<i>Tilia americana</i>	American Linden	good		N (size) YES	YES	548	11		<i>Ulmus americana</i>	American Elm	fair	- Declining	N (size) YES	YES	718	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
364	4		---	---	dead		N (condition) YES	YES	549	8		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	719	5		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
365	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	550	6		<i>Tilia americana</i>	American Linden	poor	- Being knocked over by fallen tree(s)	N (condition) YES	YES	720	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES
366	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	551	11		---	---	dead		N (condition) YES	YES	721	5		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (size) YES	YES
367	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	552	11		---	---	dead		N (condition) YES	YES	722	5		<i>Rhamnus cathartica</i>	Common Buckthorn	good		N (size) YES	YES
368	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	553	14	2/2	---	---	dead		N (condition) YES	YES	723	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES
369	16		<i>Acer saccharinum</i>	Silver Maple	fair	- Declining	N (size) YES	YES	554	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species) YES	YES	724	9		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES
370	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	555	20		<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	725	5		<i>Populus deltoides</i>	Cottonwood	good		N (size) YES	YES
371	14		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	556	6		<i>Tilia americana</i>	American Linden	good	- Poor crotch	N (size) NO	NO	726	6		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
372	5		<i>Acer x freemanii</i>	Red/Silver Maple	dead		N (condition) YES	YES	557	17		<i>Tilia americana</i>	American Linden	good		N (size) YES	YES	727	6		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
373	7		<i>Acer x freemanii</i>	Red/Silver Maple	poor	- Half dead	N (condition) YES	YES	558	20		<i>Acer saccharinum</i>	Sugar Maple	good		N (size) YES	YES	728	7		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (size) YES	YES
374	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) YES	YES	559	8		<i>Quercus spp.</i>	Oak (red family)	good		N (size) NO	NO	729	6		<i>Crataegus spp.</i>	Hawthorn	fair	- Leaning	N (size) YES	YES
375	20		<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size) YES	YES	560	10		<i>Tilia americana</i>	American Linden	good		N (size) NO	NO	730	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (size) YES	YES
376	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	561	11		---	---	dead		N (condition) YES	YES	731	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (size) YES	YES
377	10	5	<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size) NO	NO	562	4		<i>Acer saccharinum</i>	Sugar Maple	good		N (size) NO	NO	732	4		<i>Rhamnus cathartica</i>	Common Buckthorn	good		N (size) YES	YES
378	13		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES	563	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species) NO	NO	733	4		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
379	8		<i>Acer x freemanii</i>	Red/Silver Maple	dead		N (condition) YES	YES	564	6		<i>Tilia americana</i>	American Linden	fair	- Contorted crown	N (size) YES	YES	734	5		<i>Acer saccharinum</i>	Silver Maple	good		N (size) YES	YES
380	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Leaning	N (species) NO	NO	565	12	</															

PLANTING NOTES

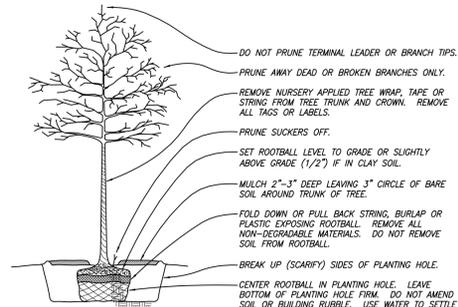
- ALL CONSTRUCTION AND PLANT MATERIAL LOCATIONS TO BE ADJUSTED ON SITE IF NECESSARY.
- ANY SUBSTITUTIONS OF PLANT MATERIAL OR ALTERATION IN PLANT SIZES OR SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE ORDINANCE STANDARDS.
- ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED, AND WRAPPED.
- PLANT BEDS TO BE MULCHED AND DRESSED WITH 4" OF SHREDDED HARD BARK.
- DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALLS. BACKFILL WITH ONE PART TOP SOIL FROM EXCAVATED PLANTING HOLE.
- REMOVE ALL TWINE, WIRE, AND BURLAP FROM THE TREE AND SHRUB EARTH BALLS AND FROM TREE TRUNKS.
- LAWN TREES TO BE MULCHED WITH A 2" WIDE MINIMUM OF 6" DEEP SHREDDED BARK RING OR APPROVED ALTERNATE DESIGN FOR TRUNK PROTECTION.
- PROVIDE HYDRO-SEEDING AND/OR SOD FOR ALL NEW LAWN AREAS OR EXISTING LAWN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.
- INSTALLATION OF PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- PLANT MATERIAL, ESPECIALLY EVERGREENS, TO BE PLANTED HIGHER THAN NORMAL WHEN HEAVY SOIL CONDITIONS (CLAY, ETC.) PREVAIL.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS, AND PARKING STALLS:
 - SHADE TREES.....5 FT.
 - ORNAMENTAL AND EVERGREEN TREES.....10 FT. (CRAB, PINE, SPRUCE, ETC.)
 - SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY.....2 FT.
- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES.
- ALL LANDSCAPING SHALL BE MAINTAINED IN A REASONABLE HEALTHY CONDITION, FREE FROM REFUSE AND DEBRIS. ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN ONE (1) YEAR OF DAMAGE OR DEATH OR THE NEXT APPROPRIATE PLANTING PERIOD, WHICHEVER COMES FIRST.

TREE PLANTING DETAIL

(NO SCALE)



- DO NOT STAKE UNLESS IN HEAVY CLAY SOIL, WINDY CONDITIONS, 3" OR GREATER DIAMETER TREE TRUNK OR LARGE CROWN. IF STAKING IS NEEDED DUE TO THESE CONDITIONS.
- STAKE WITH 2 x 2 HARDWOOD STAKES OR APPROVED EQUAL DRIVEN 6" - 8" OUTSIDE OF ROOTBALL.
- LOOSELY STAKE TREE TRUNK TO ALLOW FOR TRUNK FLEXING.
- STAKE TREES JUST BELOW FIRST BRANCH WITH 2" - 3" WIDE BELT-LINE, W/CON OR PLASTIC STRAPS (2 PER TREE ON OPPOSITE SIDES OF TREE. CONNECT FROM TREE TO STAKE HORIZONTALLY. DO NOT USE ROPE OR WIRE THROUGH A HOSE).
- REMOVE ALL STAKING MATERIALS AFTER 1 YEAR.



LEGEND



PLANT SCHEDULE & COST ESTIMATE

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	UNIT PRICE	INSTALLATION	UNIT TOTAL
☀	55 EACH	PICEA PLUNGENS	COLORADO SPRUCE	5'-6" HT.	B&B	@ \$225.00	@ \$50.00	\$15,125.00
☀	4 EACH	PINUS SYLVESTRIS	SCOTCH PINE	5'-6" HT.	B&B	@ \$225.00	@ \$50.00	\$1,100.00
○	5 EACH	TILIA TOMENTOSA	STERLING SILVER LINDEN	2.5" CAL.	B&B	@ \$200.00	@ \$50.00	\$1,250.00
○	50 EACH	TAXUS HICKSII	HICKS YEW	2'-3" HT.		@ \$50.00	@ \$25.00	\$3,750.00
						SUBTOTAL COST:	\$21,225	
						5% CONTINGENCY:	\$1,060	
						TOTAL ESTIMATE:	\$22,285	

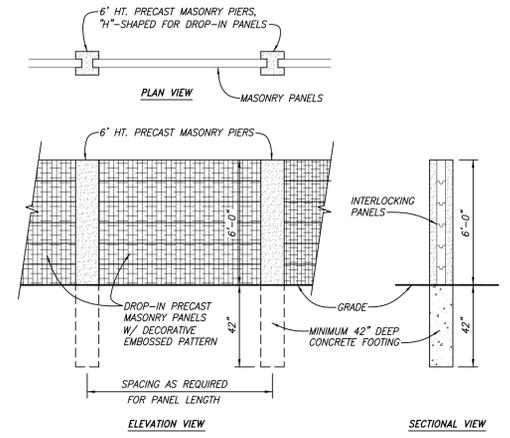
GENERAL NOTES

- SURVEY AND TOPOGRAPHIC INFORMATION SHOWN IS AS PERFORMED BY AZTEC LAND SURVEYORS INC., JOB NO. 12-255, DATED 3-15-2013.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.
- A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.
- ANY WORK WITHIN DEQUINDRE ROAD RIGHT-OF-WAY REQUIRES A PERMIT FROM THE ROAD COMMISSION OF OAKLAND COUNTY.

NOTES

REFER TO SHEET 1 FOR LEGEND OF SYMBOLS AND LINETYPES USED ON THIS PLAN.

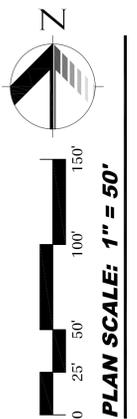
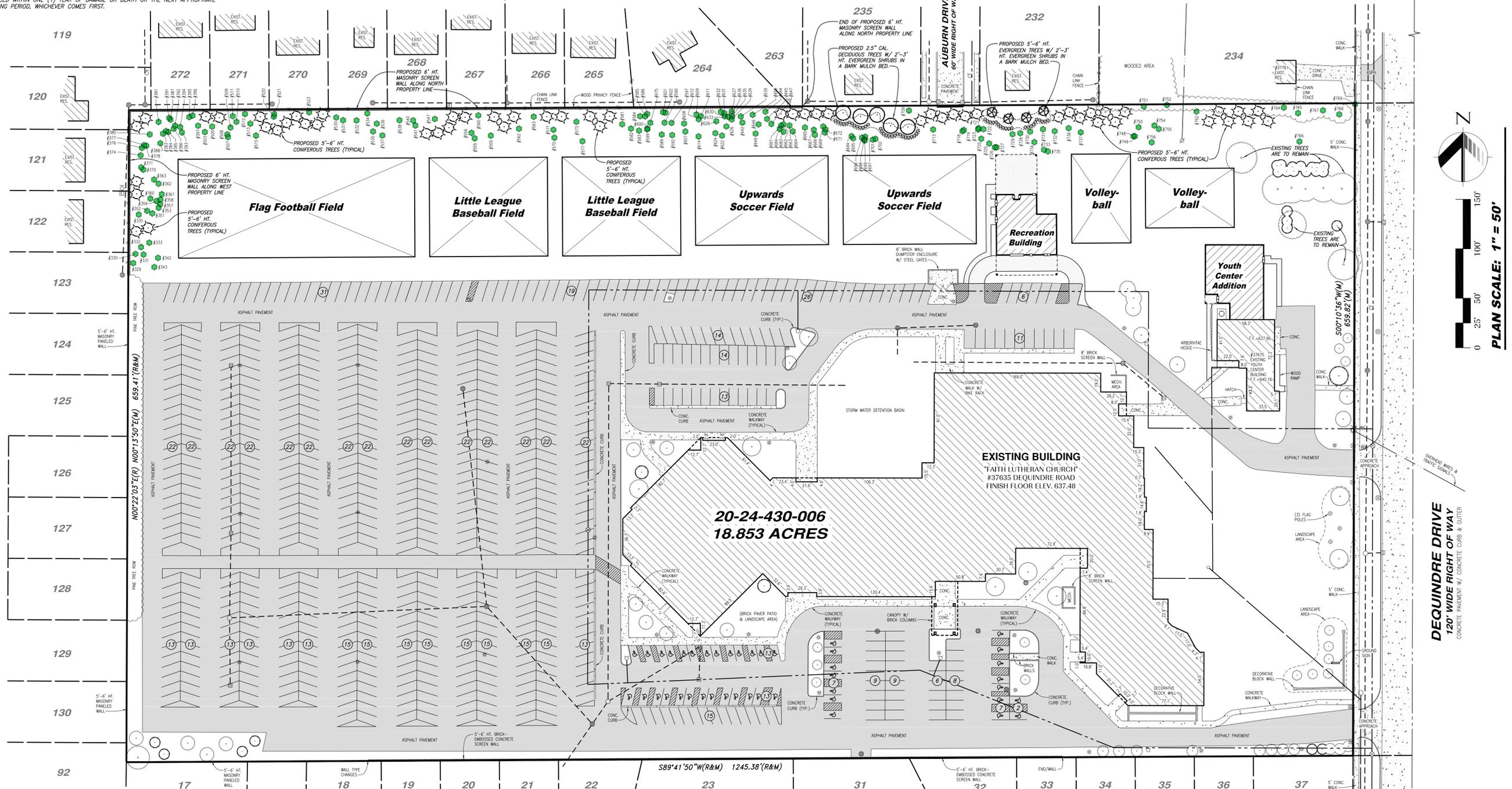
REFER TO SHEET 2 FOR DETAILED TREE INVENTORY.



SCREEN WALL DETAIL

(NO SCALE)

"DURA-CRETE" S-SERIES W/ "VERTEX" PANEL DESIGN & COLOR TO MATCH EXISTING WALL ON SITE. DIMENSIONS AND SPECIFICATIONS SHALL BE VERIFIED WITH THE WALL MANUFACTURER. HEIGHT TO BE MINIMUM 6 FEET.)



REVISIONS: REVISION PER PLANNING DEPT. 8-20-13

CLIENT: MR. JOE CASCHIA FAITH LUTHERAN CHURCH 37635 DEQUINDRE ROAD TROY, MI 48063 (248) 444-6248

JOB NO: 12-156 DATE: 5-24-13 DRAWN BY: N.P.R.

SCALE:

HORIZON ENGINEERING LLC
 CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING
 P.O. Box 182158, Shelby Township, Michigan 48318
 Phone 586.453.8097 Fax 586.580.0053

PROJECT: **Faith Lutheran Church Tree Preservation & Landscape Plan**

PLAN: #37635 DEQUINDRE ROAD PARCEL NO. 20-24-430-006 PART OF THE SOUTHEAST 1/4 OF SECTION 24, T.2N., R.1E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

SHEET: **3** OF **5**

MUNICIPAL REVIEW NUMBERS:

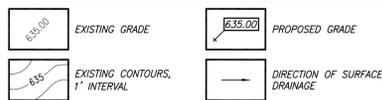
CONTRACTOR'S NOTE

The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) for the location of underground utilities

The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.

GRADING LEGEND



NOTE

REFER TO SHEET 1 FOR LEGEND OF SYMBOLS AND LINETYPES USED ON THIS PLAN.

UTILITY SUMMARY

SANITARY SEWER:
YOUTH CENTER ADDITION TO BE SERVICED FROM SEWER WITHIN EXISTING BUILDING.
RECREATION BUILDING TO BE SERVICED FROM EXISTING SANITARY SEWER WITHIN "BEAVER TRAIL SUB. NO. 2" AT THE SOUTH END OF EXISTING AUBURN DRIVE. SANITARY SEWER TO BE EXTENDED AS REQUIRED AND ALL NECESSARY CITY, COUNTY, AND STATE PERMITS SHALL BE APPLIED FOR. ALL WORK OPPOSITE SHALL BE DONE WITHIN EXISTING PUBLIC EASEMENTS AND/OR RIGHTS-OF-WAY.

STORM SEWER:
STORM SEWER SHALL BE EXTENDED ON SITE FROM EXISTING STORM SEWER WITHIN DEQUINDRE ROAD RIGHT-OF-WAY AND/OR EXISTING STORM SEWERS ON-SITE. STORM WATER DETENTION ANALYSIS AND CALCULATIONS SHALL BE PROVIDED DURING THE ENGINEERING PERMITTING PHASE OF THE PROJECT AND IS ANTICIPATED TO CONSIST OF STORAGE WITHIN THE STORM SEWER PIPE AND/OR AT THE SURFACE LEVEL WITHIN DESIGNATED DRAINAGE SWALES. ALL OUTLETS TO EXISTING STORM SEWERS SHALL BE RESTRICTED AS REQUIRED. ALL WORK WITHIN DEQUINDRE ROAD RIGHT-OF-WAY SHALL BE PERMITTED THRU THE ROAD COMMISSION FOR OAKLAND COUNTY.

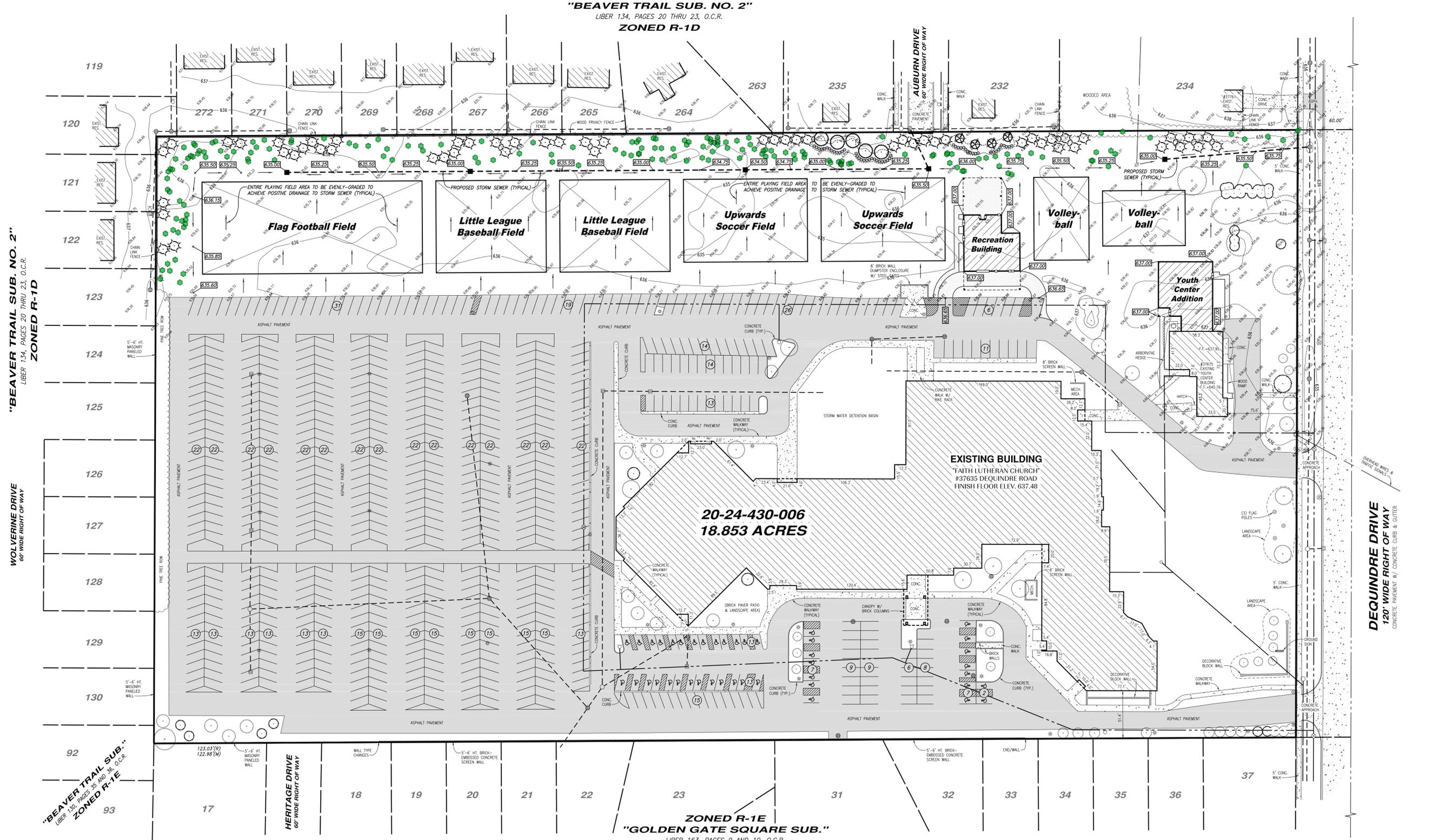
WATER MAIN:
YOUTH CENTER ADDITION TO BE SERVICED FROM WATER WITHIN EXISTING BUILDING.
RECREATION BUILDING TO BE SERVICED FROM EXISTING WATER MAIN LOCATED WITHIN THE EXISTING DRIVEWAY SOUTH OF THE PROPOSED BUILDING. ALL TAPS SHALL BE DONE IN ACCORDANCE WITH CITY STANDARDS.

GENERAL NOTES

- SURVEY AND TOPOGRAPHIC INFORMATION SHOWN IS AS PERFORMED BY AZTEC LAND SURVEYORS INC., JOB NO. 12-255, DATED 3-15-2013.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.
- A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.
- ANY WORK WITHIN DEQUINDRE ROAD RIGHT-OF-WAY REQUIRES A PERMIT FROM THE ROAD COMMISSION OF OAKLAND COUNTY.
- UTILITY AND GRADING LAYOUT AND DESIGN SHOWN IS CONCEPTUAL ONLY AND SUBJECT TO CHANGE DURING THE ENGINEERING PERMITTING PHASE OF THE PROJECT.

"BEAVER TRAIL SUB. NO. 2"
LIBER 134, PAGES 20 THRU 23, O.C.R.
ZONED R-1D

PLAN SCALE: 1" = 30'



"BEAVER TRAIL SUB. NO. 2"
LIBER 134, PAGES 20 THRU 23, O.C.R.
ZONED R-1D

WOLVERINE DRIVE
60' WIDE RIGHT OF WAY

"BEAVER TRAIL SUB. NO. 2"
LIBER 134, PAGES 20 THRU 23, O.C.R.
ZONED R-1E

HERITAGE DRIVE
60' WIDE RIGHT OF WAY

DEQUINDRE DRIVE
120' WIDE RIGHT OF WAY
CONCRETE PAVEMENT W/ CONCRETE CURB & GUTTER

ZONED R-1E
"GOLDEN GATE SQUARE SUB."
LIBER 163, PAGES 9 AND 10, O.C.R.

REVISIONS: 8-20-13 REVISED PER PLANNING DEPT. 8-20-13 REVISED PER PLANNING DEPT.

CLIENT: MR. DE CASCHIA FAITH LUTHERAN CHURCH TROY, MI 48063 (248) 44-4548

SCALE:

HORIZON ENGINEERING LLC
CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING
P.O. Box 1827158, Shelby Township, Michigan 48318
Phone 586.453.8097 Fax 586.580.0053

PROJECT: **Faith Lutheran Church**
#37635 DEQUINDRE ROAD
PARCEL NO. 20-24-430-006
PART OF THE SOUTHEAST 1/4 OF SECTION 24,
T.2N., R.1E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

PLANNING: **Preliminary Grading & Utility Plan**

SHEET: **4** OF: **5**

MUNICIPAL REVIEW NUMBERS:



FEATURES & SPECIFICATIONS

INTENDED USE — For building- and wall-mounted applications.
CONSTRUCTION — Rugged, die cast, single-piece aluminum housing. Die cast down frame has impact-resistant, tempered glass lens. Overdrive is fully sealed with a closed-cell silicone gasket. Finish: Standard finish is textured dark bronze (DDBT) polyester powder finish, with other architectural colors available.
OPTICS — High-pressure sodium reflector for superior uniformity and control. Vertical lamp orientation for improved lamp output and life.
ELECTRICAL — HID 70W-150W utilizes a high-resistance, high power factor ballast. 175W utilizes a constant-wattage auto-transformer ballast. Super-CWV ballast start ballasts, 80% efficient and EISA registration compliant, are required for 151-200W (must order SCWV option) for US shipments only. CSA, NOM or NRTL required for pre-shipment outside of the US. 200W is only available with SCWV. HEB maximum wattage 100W. QED-3-dissiminator (photo-cathode) reflector finish ballast and start from supply wires. Ballasts are precision-wound and 100% factory tested. Ceramic metal halide lamps are recommended for use in applications where superior color rendition, lumen maintenance and longer lamp life are desired. Sockets for HID porcelain, medium-base socket (E12 for 70W/MH) with copper alloy, nickel-plated screw shell and center contact.
INSTALLATION — Universal mounting plate with integral mounting bolts supports the fixture for easy, one-person installation.
LISTINGS — CSA Certified to U.S. and Canadian standards. Down orientation only. NOM Certified (see Options). IP65 rated. HID 175W and below listed to 40° C ambient. 200W listed to 25° C ambient. The ELED option is listed to 25° C ambient. ELED U.S. Patent No. 7,737,640.
 Note: Specifications subject to change without notice.

Catalog Number	
Notes	
Type	



Wall-Mounted Luminaire

TWF1

METAL HALIDE: 70M-200M
HIGH PRESSURE SODIUM: 70S-150S

Options	Specifications
WB01: 14 (0.64)	Height: 10.176 (25.6)
WB02: 10.176 (25.6)	Depth: 9.5 (24.1)
WB03: 24 lbs (10.9 kg)	Weight: 24 lbs (10.9 kg)
All dimensions are inches (centimeters) unless otherwise indicated.	All dimensions are inches (centimeters) unless otherwise indicated.
Weight as configured in example below.	Weight as configured in example below.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative. Example: TWF1 100M TB LP1

Series	Wattage	Ballast	Mounting	Options	Finish**	Lamp†
TWF1	Metal halide 70M 100M 150M 175M 200M	Magnetic ballast Constant wattage ballast HEB Super-CWV ballast	(Blank) Surface mount CW Constant wattage ballast HEB Super-CWV ballast	Shipped installed as listed S1 Single base (120, 277, 347V, n/a TB) D1 Double base (208, 240, 480V, n/a TB) QKSD Quartz socket with time delay** QKST Quartz socket system** EC Emergency circuit** ELED Emergency LED secondary source battery pack (4" F min. operating temperature)** ZLED Emergency LED secondary source (two modules) battery pack (4" F min. operating temperature)** DC12 Emergency circuit 12 with (20W lamp included)** DC12 Emergency circuit 12 with (20W lamp included)** DC20 Emergency circuit 12 with (20W lamp included)** DC20 Emergency circuit 12 with (20W lamp included)** FE Photoelectric cell button type (n/a TB or 480V)** CSA CSA certified NOM NOM certified NRTL International shipment for 175M	(Blank) Dark bronze, textured DDBT Sandstone, textured DDBL Black, textured CR Corrosion-resistant finish CET Non-slick protective coating (black only)	LFP Lamp included LAP Lamp less

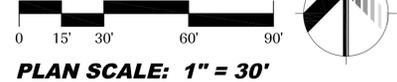
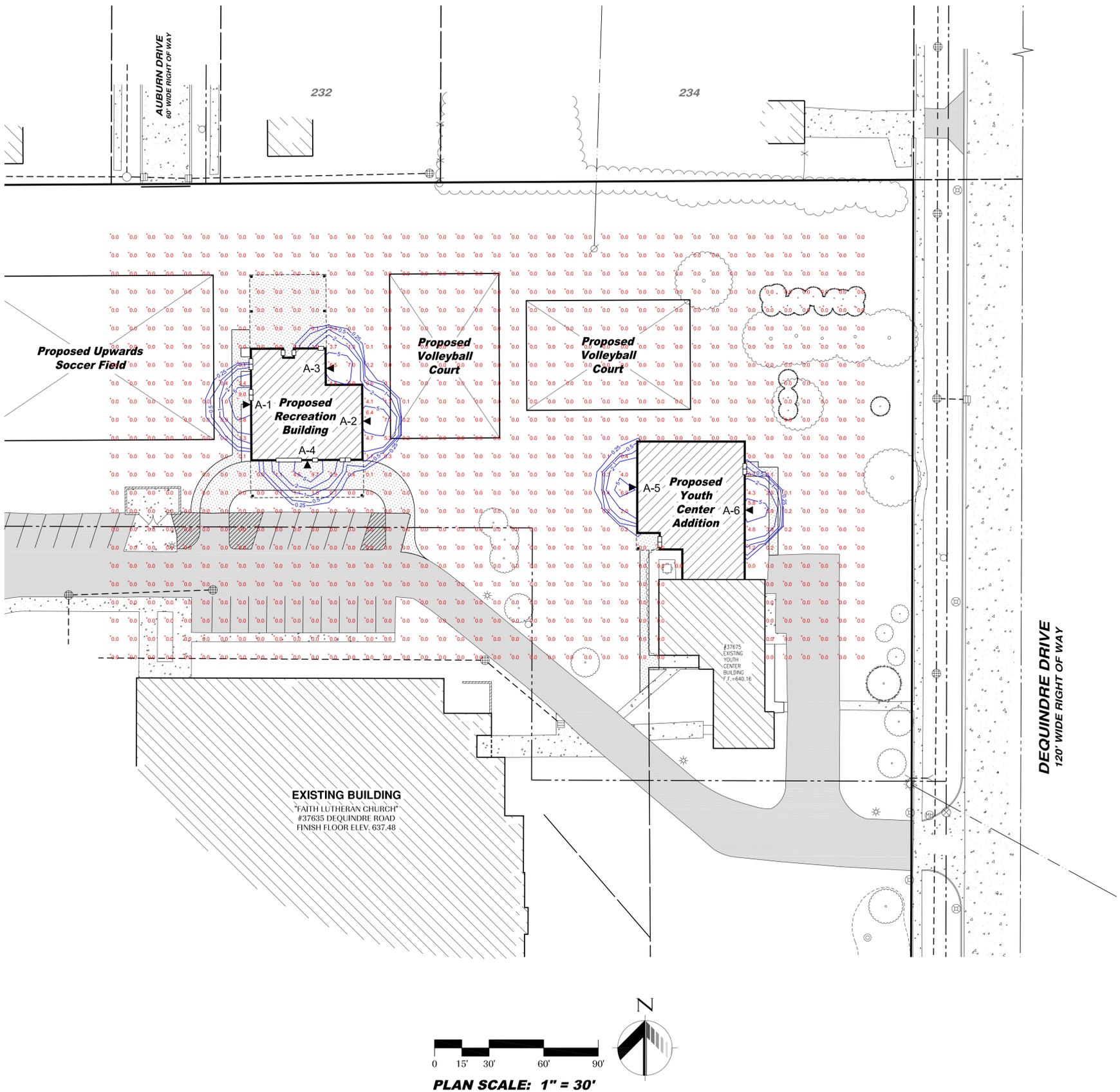
Notes:
 1. Must be ordered with lamp included (ELED, 70M/MH requires HEB ballast option).
 2. Must specify VMB in Canada.
 3. Optional multi-watt ballast (120, 208, 240, 277V; 120, 277V; 347V in Canada—ships as 120/240V).
 4. Consult factory for availability.
 5. Available in 100 or 150W metal halide only. HEB wattage must be specified as MW1E, 150, 200, 240 or 277 only.
 6. Not available with MPV, 70M or 100M.
 7. May be ordered as an accessory. Profile with TWF1.
 8. Must specify finish when ordered as an accessory. Not available with ELED or ZLED.
 9. Maximum allowed wattage lamp included.
 10. Cannot be ordered with any other emergency option.
 11. Maximum wattage 100W and 70S, only available in 120V or 277V.
 12. Must specify wattage.
 13. Not available with TB or TB.
 14. Consult factory for maximum wattage available with this option.
 15. Must be ordered with fixture, cannot be field installed.
 16. See www.lithonia.com/ledoptions for additional color options.
 17. Must be specified.

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
▶	A	6	TWF1 70M T6	BUILDING MOUNTED LUMINAIRE WITH VERTICAL LAMP ORIENTATION (T6 70 WATT CERAMIC MH LAMP)	ONE 70-WATT CLEAR T6 CERAMIC METAL HALIDE, VERTICAL BASE UP POS.	TWF1_70M_T6 .ies	6600	1.00	80

LIGHTING NOTES

- THIS PLAN DEPICTS NEW LIGHTING ONLY. NO EXISTING LIGHT FIXTURES ON SITE WERE CONSIDERED FOR PURPOSES OF THIS PLAN.
- THE BUILDER SHALL VERIFY ALL LIGHT FIXTURE SPECIFICATIONS AND LOCATIONS WITH THE MANUFACTURER, ARCHITECT, AND LANDOWNER PRIOR TO INSTALLATION. ANY DEVIATIONS FROM THIS PLAN SHALL BE REVIEWED BY THE ENGINEER AND CITY OF TROY PLANNING DEPARTMENT PRIOR TO ACCEPTANCE.
- MOUNTING HEIGHT FOR EACH FIXTURE IS SET TO EIGHT (8) FEET ABOVE GRADE. ACTUAL MOUNTING HEIGHT SHALL BE VERIFIED BY THE BUILDER.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE OR AT SPECIFIED SURFACE.
- THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
- THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE BUILDER IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.



CLIENT: MR. DE CASCHIA
FAITH LUTHERAN CHURCH
1827 1/2 DEQUINDRE RD.
TROY, MI 48063
(248) 444-6248

REVISIONS: 8/20/13 REISED PER PLANNING COMMISSION.

JOB NO: 12-156
DATE: 6-17-13
DRAWN BY: N.P.R.

SCALE: 1\"/>

HORIZON ENGINEERING LLC
CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING
P.O. Box 1827158, Shelly Township, Michigan 48318
Phone 586.453.8097 Fax 586.580.0053

PROJECT: **Faith Lutheran Church**
#37635 DEQUINDRE ROAD
PARCEL NO. 20-24-430-006
PART OF THE SOUTHEAST 1/4 OF SECTION 24,
T.2N., R.1E., CITY OF TROY, OKLAND COUNTY, MICHIGAN

PLAN: **Site Lighting & Photometric Plan**

SHEET: **5** OF **5**
MUNICIPAL REVIEW NUMBERS:

Eric A. Olson, PLLC
115¹/₂ South Saginaw Street
Holly, Michigan 48442

Landscape Architect, Certified Arborist, Municipal Consultant

(248) 634-4320
fax: (248) 634-4409
EOlsonRLA@sbcglobal.net

revised August 5, 2013
August 5, 2013

Mr. Nathan P. Robinson, P.E.
Horizon Engineering, LLC
P.O. Box 182158
Shelby Twp., Michigan 48318

Subject: Tree Survey report for **Faith Lutheran Church Perimeter Trees**, in the City of
Troy, Michigan
Project No. 13MF-01

Dear Mr. Robinson:

On August 2, 2013, I inspected 341 trees on the above-mentioned site. The trees on the list are subject to inspection and amending by the City:

• Total trees	341
• Trees Not Regulated, in my opinion	290
• Regulated trees	51

The City of Troy regulates trees between 4" to 10" d.b.h. The Tree List indicates trees over 10" as 'Not Regulated'.

Let me know if you need additional information. If you need a Tree Protection Plan, or a Tree Replacement/Landscape Plan, contact me for a price.

Sincerely,



Eric A. Olson

Attachments: Tree List (FaithLutheranChurchPerimeterTrees-01-TRE-5_final.xls)

revised August 5, 2013

TREE LIST for: Faith Lutheran Church, 37635 Dequindre Road, Troy, Michigan							
Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
329	24		<i>Quercus spp.</i>	Oak (red family)	fair	- Dead branches	N (size)
330	11		<i>Tilia americana</i>	American Linden	good		N (size)
331	11		<i>Quercus spp.</i>	Oak (red family)	fair	- Epicormic branching	N (size)
332	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
333	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
334	5	4	<i>Ulmus americana</i>	American Elm	fair	- Poor crotch	N (species)
335	12		<i>Quercus spp.</i>	Oak (red family)	good		N (size)
336	12		---	---	dead		N (condition)
337	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
338	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
339	14		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
340	4		<i>Crataegus spp.</i>	Hawthorn	good		
341	9		<i>Acer x freemanii</i>	Red/Silver Maple	good		
342	12		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
343	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
344	9		<i>Ulmus americana</i>	American Elm	good		N (species)
345	6		<i>Carya ovata</i>	Shagbark Hickory	good		
346	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
347	4		---	---	dead		N (condition)
348	4		<i>Ulmus americana</i>	American Elm	fair	- Poor crotch	N (species)
349	18		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
350	8		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
351	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
352	10		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Contorted crown	
353	18		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
354	5		<i>Acer rubrum</i>	Red Maple	good		
355	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
356	17		<i>Acer saccharinum</i>	Silver Maple	poor	- Nearly dead	N (size)
357	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		
358	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
359	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		
360	7		<i>Crataegus spp.</i>	Hawthorn	good		
361	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
362	5		<i>Tilia americana</i>	American Linden	good		
363	4		<i>Tilia americana</i>	American Linden	good		
364	4		---	---	dead		N (condition)
365	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
366	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
367	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
368	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
369	16		<i>Acer saccharinum</i>	Silver Maple	fair	- Declining	N (size)
370	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		
371	14		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
372	5		---	---	dead		N (condition)
373	7		<i>Acer x freemanii</i>	Red/Silver Maple	poor	- Half dead	N (condition)
374	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		
375	20		<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
376	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		
377	10	5	<i>Acer x freemanii</i>	Red/Silver Maple	good		
378	13		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
379	8		---	---	dead		N (condition)
380	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Leaning	N (species)
381	5		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Contorted crown	
382	13	9	---	---	dead		N (condition)

revised August 5, 2013

Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
383	9		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Epicormic branching	
384	14		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
385	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Epicormic branching	N (species)
386	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
387	20		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
388	14		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
389	6		<i>Acer x freemanii</i>	Red/Silver Maple	good		
390	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
391	4		<i>Acer x freemanii</i>	Red/Silver Maple	good		
392	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
393	13		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
394	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
395	8		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
396	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		
397	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
398	9		---	---	dead	- Falling over	N (condition)
399	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		
400	17		---	---	dead		N (condition)
501	14		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
502	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		
503	20		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
504	16		<i>Acer saccharinum</i>	Silver Maple	fair	- Dead branches	N (size)
505	6		<i>Acer x freemanii</i>	Red/Silver Maple	good		
506	13		---	---	dead		N (condition)
507	9		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
508	16		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
509	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
510	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
511	16		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
512	20		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
513	17		<i>Acer saccharinum</i>	Silver Maple	fair	- Contorted crown	N (size)
514	15		---	---	dead		N (condition)
515	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
516	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
517	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
518	20		<i>Acer saccharinum</i>	Silver Maple	fair	- Declining	N (size)
519	4		<i>Crataegus spp.</i>	Hawthorn	fair	- Rot in trunk	
520	7		<i>Tilia americana</i>	American Linden	good		
521	8		<i>Tilia americana</i>	American Linden	fair	- Contorted crown	
522	10	10	<i>Tilia americana</i>	American Linden	fair	- Poor crotch and contorted crown	
523	31		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
524	16		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
525	5		<i>Ulmus americana</i>	American Elm	good		N (species)
526	17		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
527	8		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
528	7		<i>Ulmus americana</i>	American Elm	good		N (species)
529	9		<i>Tilia americana</i>	American Linden	fair	- Leaning	
530	14	4/3	<i>Tilia americana</i>	American Linden	good		N (size)
531	4		<i>Acer x freemanii</i>	Red/Silver Maple	good		
532	15		<i>Carya ovata</i>	Shagbark Hickory	good		N (size)
533	23		<i>Acer saccharinum</i>	Silver Maple	poor	- Severe rot throughout trunk	N (size)
534	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
535	14		<i>Acer saccharum</i>	Sugar Maple	good		N (size)
536	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size)

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Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
537	20		<i>Quercus spp.</i>	Oak (white family)	good		N (size)
538	15		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
539	13	12	<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Poor crotch	N (size)
540	14	4	<i>Acer saccharinum</i>	Silver Maple	good		N (size)
541	18		<i>Acer saccharinum</i>	Silver Maple	fair	- Leaning	N (size)
542	10	10	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)
543	18		<i>Acer saccharinum</i>	Silver Maple	poor	- Top missing	N (size)
544	8	4	<i>Tilia americana</i>	American Linden	fair	- Fallen tree(s) leaning on it	
545	11		---	---	dead	- Falling over	N (condition)
546	21		<i>Acer saccharinum</i>	Silver Maple	poor	- Severe decline	N (size)
547	5	4	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
548	11		<i>Ulmus americana</i>	American Elm	fair	- Declining	N (size)
549	8		---	---	dead		N (condition)
550	6		<i>Tilia americana</i>	American Linden	poor	- Being knocked over by fallen tree(s)	N (condition)
551	11		---	---	dead		N (condition)
552	11		---	---	dead		N (condition)
553	14	2/2	---	---	dead		N (condition)
554	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
555	20		<i>Tilia americana</i>	American Linden	good		N (size)
556	6		<i>Tilia americana</i>	American Linden	fair	- Poor crotch	
557	17		<i>Populus deltoides</i>	Cottonwood	good		N (size)
558	20		<i>Acer saccharum</i>	Sugar Maple	good		N (size)
559	8		<i>Quercus spp.</i>	Oak (red family)	good		
560	10		<i>Tilia americana</i>	American Linden	good		
561	11		---	---	dead		N (condition)
562	4		<i>Acer saccharum</i>	Sugar Maple	good		
563	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
564	6		<i>Tilia americana</i>	American Linden	fair	- Contorted crown	
565	12		<i>Tilia americana</i>	American Linden	good		N (size)
566	12		<i>Prunus serotina</i>	Black Cherry	fair	- Contorted crown	N (size)
567	4		---	---	dead		N (condition)
568	4		<i>Tilia americana</i>	American Linden	poor	- Being knocked over by fallen tree(s)	N (condition)
569	14	12/3	<i>Tilia americana</i>	American Linden	fair	- Poor crotch	N (size)
570	11	8/5	<i>Tilia americana</i>	American Linden	good		N (size)
571	15		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
572	8	6	<i>Acer negundo</i>	Boxelder	fair	- Poor crotch and contorted crown	N (species)
573	4		<i>Acer saccharinum</i>	Silver Maple	fair		N (species)
574	8		---	---	dead		N (condition)
575	12		<i>Acer saccharinum</i>	Silver Maple	fair	- Rot in trunk	N (size)
576	15	4	<i>Acer saccharinum</i>	Silver Maple	good		N (size)
577	25		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
578	20		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
579	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
580	20		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
581	5		<i>Ulmus americana</i>	American Elm	good		N (species)
582	10		<i>Ulmus americana</i>	American Elm	fair	- Leaning	N (species)
583	6		<i>Ulmus americana</i>	American Elm	good		N (species)
584	11		<i>Ulmus americana</i>	American Elm	fair	- Leaning	N (size)
585	6		<i>Ulmus americana</i>	American Elm	good		N (species)
586	16	8	<i>Ulmus americana</i>	American Elm	good		N (size)
587	8	5	---	---	dead		N (condition)
588	7		---	---	dead		N (condition)
589	5		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
590	10		<i>Acer x freemanii</i>	Red/Silver Maple	good		

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Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
591	4		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
592	7		<i>Ulmus americana</i>	American Elm	good		N (species)
593	22		<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
594	5		---	---	dead		N (condition)
595	4		<i>Prunus serotina</i>	Black Cherry	fair	- Contorted crown	
596	4		<i>Acer saccharum</i>	Sugar Maple	fair	- Declining	
597	4		<i>Ulmus americana</i>	American Elm	good		N (species)
598	7		<i>Ulmus americana</i>	American Elm	good		N (species)
599	9		<i>Ulmus americana</i>	American Elm	good		N (species)
600	6		<i>Ulmus americana</i>	American Elm	fair	- Leaning	N (species)
601	4		<i>Ulmus americana</i>	American Elm	good		N (species)
602	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
603	15	9/5/4	<i>Ulmus americana</i>	American Elm	fair	- Poor crotch and contorted crown	N (size)
604	4		<i>Ulmus americana</i>	American Elm	fair	- Epicormic branching	N (species)
605	10		<i>Ulmus americana</i>	American Elm	good		N (species)
606	4		<i>Ulmus americana</i>	American Elm	good		N (species)
607	6		<i>Ulmus americana</i>	American Elm	good		N (species)
608	5		<i>Ulmus americana</i>	American Elm	good		N (species)
609	5		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
610	18	15/5/4	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
611	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		
612	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
613	10		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Rot in trunk	
614	11		<i>Acer x freemanii</i>	Red/Silver Maple	good		N (size)
615	14	12	<i>Acer saccharinum</i>	Silver Maple	fair	- Rot in trunk	N (size)
616	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
617	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
618	15		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
619	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
620	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
621	10		<i>Acer saccharinum</i>	Silver Maple	fair	- Scarred trunk	N (species)
622	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
623	4		<i>Acer x freemanii</i>	Red/Silver Maple	good		
624	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
625	8		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Scarred trunk & epicormic branching	
626	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
627	4		---	---	dead		N (condition)
628	9		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Epicormic branching	
629	21		<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch and contorted crown	N (size)
630	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
631	4		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
632	4		<i>Acer x freemanii</i>	Red/Silver Maple	good		
633	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
634	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
635	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
636	4		---	---	dead		N (condition)
637	5		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
638	14	11	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
639	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
640	12	9	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch and contorted crown	N (size)
641	10	9/4	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)
642	13	9	<i>Acer saccharinum</i>	Silver Maple	good		N (size)
643	12	10/6	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
644	15		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (size)

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Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
645	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
646	13		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
647	16		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
648	13		<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Scarred trunk	N (size)
649	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
650	5		---	---	dead		N (condition)
651	5	3	<i>Acer saccharinum</i>	Silver Maple	fair	- Smallest stem dead	N (species)
652	12		<i>Acer saccharinum</i>	Silver Maple	fair	- Rot in trunk	N (size)
653	4		<i>Ulmus americana</i>	American Elm	good		N (species)
654	11	11	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
655	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
656	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
657	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
658	9		<i>Acer saccharinum</i>	Silver Maple	fair	- Epicormic branching	N (species)
659	11		<i>Acer saccharinum</i>	Silver Maple	fair	- Scarred trunk	N (size)
660	9	5	<i>Acer x freemanii</i>	Red/Silver Maple	fair	- Smallest stem dead	
661	4		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
662	9		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
663	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
664	6		<i>Ulmus americana</i>	American Elm	good		N (species)
665	8		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
666	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
667	5		<i>Ulmus americana</i>	American Elm	good		N (species)
668	13	12/12/10	<i>Acer saccharinum</i>	Silver Maple	fair	- Smallest stem dead	N (size)
669	20	4	<i>Acer saccharinum</i>	Silver Maple	good		N (size)
670	4		---	---	dead		N (condition)
671	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
672	7		<i>Ulmus americana</i>	American Elm	good		N (species)
673	12	5	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
674	16		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
675	4		<i>Ulmus americana</i>	American Elm	good		N (species)
676	14		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
677	5		---	---	dead		N (condition)
678	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
679	6		<i>Acer saccharinum</i>	Silver Maple	fair	- Leaning	N (species)
680	15		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
681	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Scarred trunk	N (species)
682	6		---	---	dead		N (condition)
683	7		<i>Acer saccharinum</i>	Silver Maple	fair	- Epicormic branching	N (species)
684	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
685	13		<i>Acer saccharinum</i>	Silver Maple	fair	- Epicormic branching	N (size)
686	11		<i>Acer saccharinum</i>	Silver Maple	fair	- Crack in trunk	N (size)
687	9	7	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)
688	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
689	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
690	15	14/8	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
691	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
692	12		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
693	7		---	---	dead		N (condition)
694	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
695	5	4/2	<i>Acer saccharinum</i>	Silver Maple	good		N (species)
696	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Contorted crown	N (species)
697	6		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
698	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)

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Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
699	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
700	18	18	<i>Populus deltoides</i>	Cottonwood	fair	- Poor crotch	N (size)
701	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
702	21		<i>Populus deltoides</i>	Cottonwood	fair	- Sparse crown	N (size)
703	9		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
704	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Scarred trunk	N (species)
705	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
706	7	3	<i>Acer saccharinum</i>	Silver Maple	good		N (species)
707	4		<i>Ulmus americana</i>	American Elm	good		N (species)
708	14	12/8	---	---	dead		N (condition)
709	19		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
710	4		<i>Ulmus americana</i>	American Elm	good		N (species)
711	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
712	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
713	10	7	<i>Acer saccharinum</i>	Silver Maple	good		N (species)
714	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
715	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
716	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
717	5		<i>Acer saccharinum</i>	Silver Maple	fair	- Leader missing	N (species)
718	4		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
719	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
720	5		<i>Acer x freemanii</i>	Red/Silver Maple	good		
721	5		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
722	5		<i>Rhamnus cathartica</i>	Common Buckthorn	good		N (species)
723	8		<i>Acer x freemanii</i>	Red/Silver Maple	good		
724	9		<i>Acer x freemanii</i>	Red/Silver Maple	good		
725	5		<i>Populus deltoides</i>	Cottonwood	good		N (species)
726	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
727	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
728	7		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
729	6		<i>Crataegus spp.</i>	Hawthorn	fair	- Leaning	
730	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
731	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
732	4		<i>Rhamnus cathartica</i>	Common Buckthorn	good		N (species)
733	5		<i>Ulmus americana</i>	American Elm	good		N (species)
734	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
735	4		<i>Ulmus americana</i>	American Elm	good		N (species)
736	4	4/2/2	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Epicormic branching	N (species)
737	8		<i>Ulmus americana</i>	American Elm	good		N (species)
738	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
739	4		<i>Ulmus americana</i>	American Elm	good		N (species)
740	7		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
741	4	2	<i>Rhamnus cathartica</i>	Common Buckthorn	poor	- Top broken	N (species)
742	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
743	6		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
744	5	5	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Poor crotch	N (species)
745	4		<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
746	8		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
747	4		<i>Ulmus americana</i>	American Elm	good		N (species)
748	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
749	10		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
750	11		<i>Acer saccharinum</i>	Silver Maple	good		N (size)
751	6		<i>Ulmus americana</i>	American Elm	good		N (species)
752	6	4	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)

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Tree #	d.b.h.	Secondary stem(s)	Botanical Name	Common Name	Condition	Comments	(N) Not Regulated
753	7	5	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)
754	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
755	5		<i>Ulmus americana</i>	American Elm	fair	- Contorted crown	N (species)
756	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
757	11	9/etc.	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (size)
758	4	4/4	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
759	7	6/6	<i>Rhamnus cathartica</i>	Common Buckthorn	fair	- Contorted crown	N (species)
760	4		<i>Ulmus americana</i>	American Elm	poor	- Gnarled and vine-choked	N (species)
761	4	4/3	<i>Acer saccharinum</i>	Silver Maple	fair	- Poor crotch	N (species)
762	5		<i>Acer saccharinum</i>	Silver Maple	good		N (species)
763	6	5/5/3/3	<i>Acer saccharinum</i>	Silver Maple	fair	- Growing into overhead utility lines	N (species)
764	4		<i>Morus spp.</i>	Mulberry	good		
765	9		<i>Picea glauca</i>	White Spruce	fair	- Dead branches	
766	12	7	<i>Pinus sylvestris</i>	Scotch Pine	good		N (size)
767	9		<i>Ulmus pumila</i>	Siberian Elm	fair	- Declining	N (species)
768	5		<i>Picea glauca</i>	White Spruce	good		
769	21		<i>Acer saccharinum</i>	Silver Maple	good		N (size)



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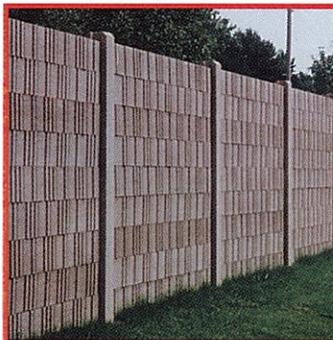


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Available in a variety of beautiful earth tone colors and textured patterns, the architect or designer has freedom to create a practical, permanent wall in total harmony with its surroundings.

S-series Standard Screenwall/Noise Barrier Slatwall Series



VERTEX PANEL DESIGN

OFFSET BLOCK PANEL DESIGN



VERTEX PANEL DESIGN

MIXED PANEL DESIGN



BENEFITS OF PRECAST MASONRY SCREENWALLS OVER CAST IN PLACE, BRICK OR BLOCK WALLS

- Cost
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- Maintenance and Repairability
- Strength and Durability
- Easily Adaptable to Underground Utilities
- Fits any Terrain
- Approved by State D.O.T.s
- Aesthetics
- Site Disturbance
- Year Round Installation
- No Continuous Footing Required
- Tree Survival
- Meets Specifying Requirements



Full Engineering Drawings and Specifications Available on Request

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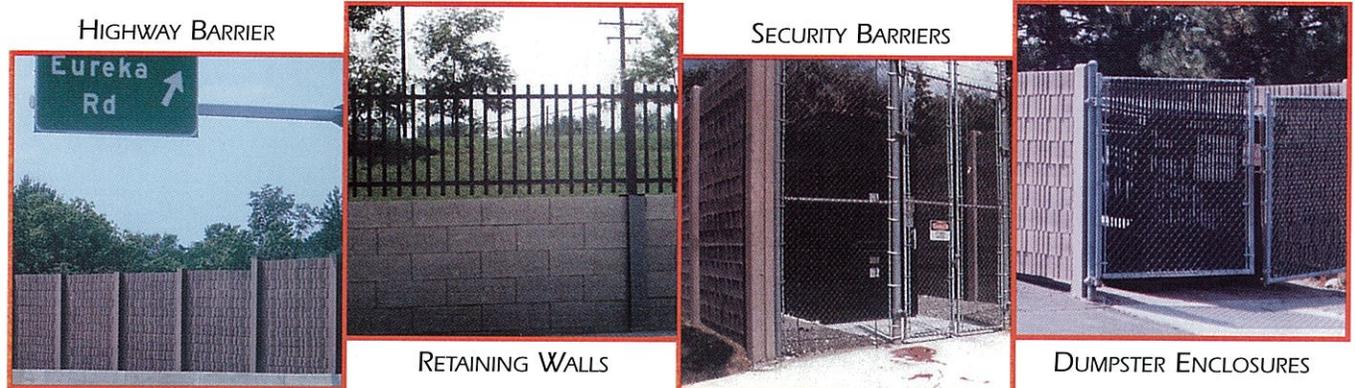
Benefits Associated With Dura-Crete Products Include:

- Versatility:** Heights as needed and easily modified to meet a wide range of wind loads and special requirements.
- Reliability:** High strength, high performance concrete
- Durability:** Engineered to last, improved reinforcement
- Quality:** Members of the National Precast Association (NPCA)
- Expertise:** "Certified" Technical Team trained in the manufacturing of concrete masonry units. Member of the American Fence Association
- Assurance:** Quality controlled manufacturing
- Local Content:** Products manufactured in Warren, Michigan U.S.A.
- Approval:** Dura-Crete has been the preferred choice by many architects and engineers, general contractors, utility companies, municipalities federal and DOT, transportation, developers, medical, schools and churches...



H.D.-series Combination Highway/Retaining Slatwall Series

Increased panel thickness/steel reinforcement • available in Vertex and Offset Block Panel Designs



NOISE BARRIER Designed in accordance with 1989 AASHTO Guide to Specifications for Structural Design of Noise Barriers and ACI-318.

WIND LOAD DESIGN Designed up to 80 MPH wind load

HEIGHTS Standard heights from 8" up to 20'. Additional heights may be designed upon request.

NOISE ABSORPTION NRC coefficient of 0.50.

CONCRETE STRENGTH 4000 PSI at 28 days.

PANELS Tongue and groove, lock into each other for stability and noise protection.

WEIGHT Standard density concrete with additives weighs approximately 150 PCF

MATERIAL Zero slump, reinforced pre-cast concrete.

FREEZE THAW CYCLES Excellent durability.

REINFORCING STEEL Epoxy Coated, Grade 60 rebar eliminates any chance of corrosion.

POSTS Concrete or steel I-beams.

FOUNDATIONS Standard foundations designed for 22 PSF and soil compaction of 95%

COLORS Available in natural gray and two earth tones. (Custom colors available upon request.)



NATURAL GRAY



MESA BUFF

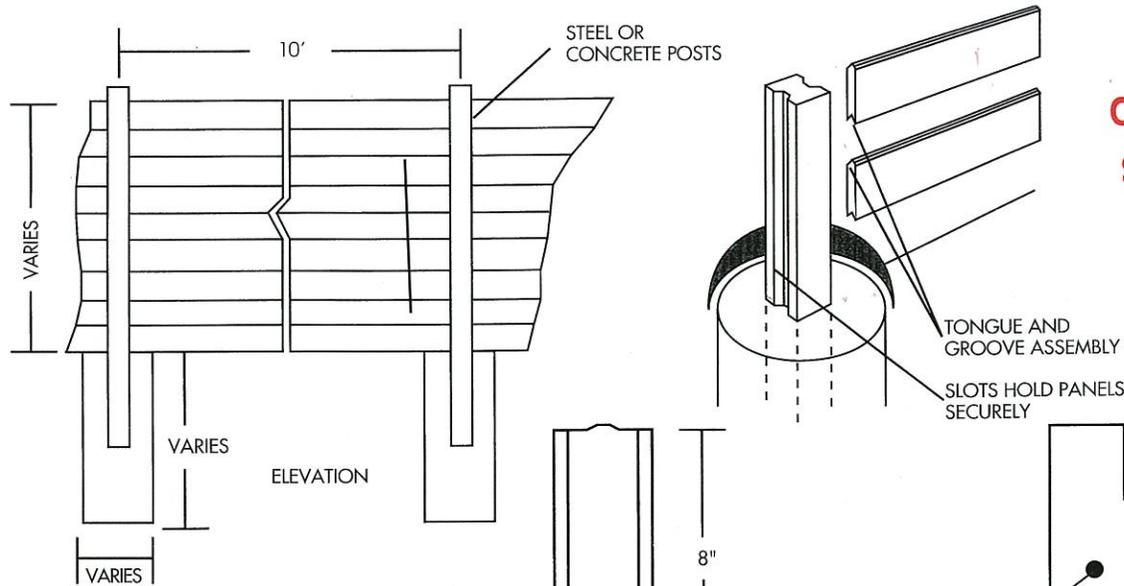
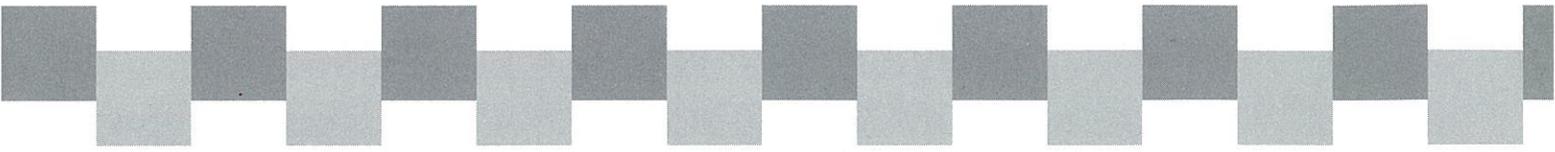


CORAL ROSE



Full Engineering Drawings and Specifications Available on Request

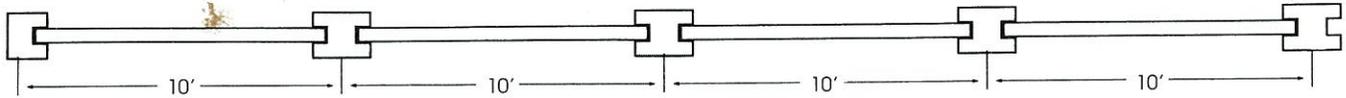
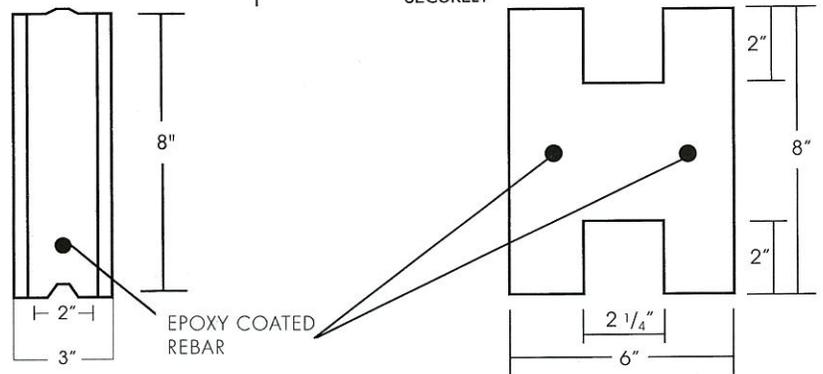
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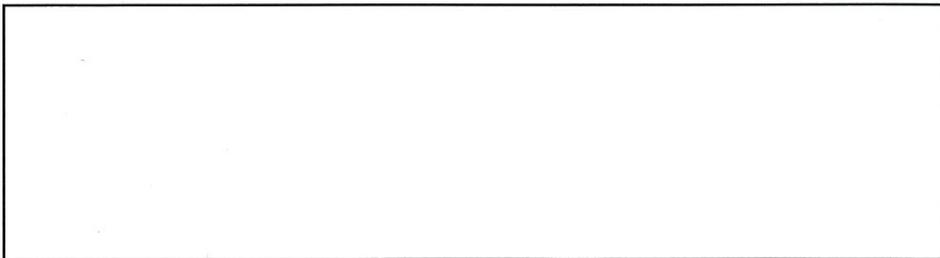
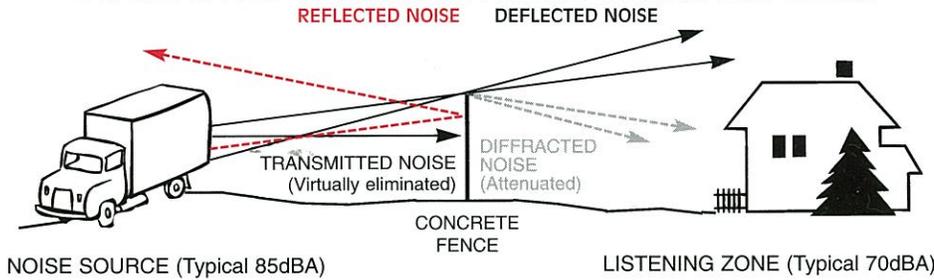
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COMPREHENSIVE
SPECIFICATIONS
AND
ENGINEERING
DRAWINGS**

PANELS OF GREATER THICKNESS AND ADDITIONAL STEEL REINFORCEMENT FOR EARTH RETENTION CAN BE ENGINEERED UPON REQUEST.

FOOTING AND REINFORCING DIMENSIONS BASED ON HEIGHT OF WALL AND SOIL, CONDITIONS.



TYPICAL EFFECT OF CONCRETE FENCING ON NOISE REDUCTION

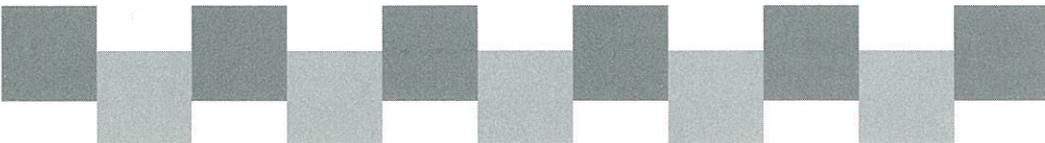


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Warren, MI 48089

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www.dura-crete.net



DATE: September 17, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PUBLIC HEARING - PLANNED UNIT DEVELOPMENT KILMER PLACE (File Number PUD 10-A) – Proposed Revision to Concept Development Plan and Preliminary Development Plan, Northeast Corner of Big Beaver and Kilmer (3088 Kilmer), Section 22, Currently Zoned PUD (Planned Unit Development #10) District

Big Beaver and Kilmer PUD (PUD #10) received Preliminary Development Plan approval from City Council on June 15, 2009. The approved mixed-use PUD included approximately 19,000 square feet of retail and fourteen (14) attached residential units.

The entire site is approximately 2.5 acres in area. The residential component, known as Kilmer Place, is approximately 1.083 acres in area.

The applicant Robertson Brothers Company intends to add two (2) additional units to the site, bringing the total of residential units to sixteen (16). This revision is considered an increase in intensity over what was approved; therefore, the Concept Development Plan (CDP) and Preliminary Development Plan (PDP) need to be revised. The applicant seeks to get these approvals concurrently.

A public hearing is scheduled for this item for the September 24, 2013 Special/Study meeting.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

G:\PUD's\PUD 010-A Kilmer Place\PC Memo 09 24 2013.doc

Resolution # PC-2013-09-

Moved by:
Seconded by:

WHEREAS, On June 15, 2009, City Council approved the Preliminary Development Plan for the BBK Mixed-Use Development Planned Unit Development (PUD 10), located on the northeast corner of Big Beaver and Kilmer, located in Section 22; and

WHEREAS, The approximately 2.5 acre BBK mixed-use PUD included approximately 19,000 square feet of retail and fourteen (14) attached residential units; and

WHEREAS, Construction on the retail component of the PUD along the Big Beaver frontage was recently completed; and

WHEREAS, Robertson Brothers Company intends to add two (2) additional residential units within the residential component of the PUD, known as Kilmer Place; and

WHEREAS, The proposed increase in two (2) residential units, improvements to the outdoor elements, and increase in guest parking is in compliance with what was originally approved; and

WHEREAS, The proposed revision to the PUD meets the Standards for Approval set forth in Section 11.03.

BE IT RESOLVED, That the Planning Commission recommends to City Council that Concept Development Plan Approval and Preliminary Development Plan Approval for the revised residential component of BBK Mixed-Use Development Planned Unit Development, be granted.

Yes:
Absent:

MOTION CARRIED/FAILED



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.



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: September 18, 2013

PUD Amendment For City of Troy, Michigan

GENERAL INFORMATION

Applicant	Robertson Brothers
Project Name:	Kilmer Place PUD
Plan Date:	September 14, 2013
Location:	Kilmer Drive and Big Beaver
Zoning:	PUD
Action Requested:	Amend Planned Unit Development Agreement

BACKGROUND

Big Beaver Kilmer Planned Unit Development (PUD) received Concept Development Plan (CDP) approval on December 15, 2008 and Preliminary Development Plan (PDP) approval on June 15, 2009.

The PUD is a mixed-use project with a commercial component along Big Beaver that consists of a 9,607 S.F. retail building, a 7,202 S.F. retail building, and a 1,800 S.F. Tim Horton's restaurant with a drive thru. The residential component to the north of the commercial component includes fourteen (14) residential units. Construction was recently completed on the commercial portion of this project. Underground utilities have been constructed for the residential component but construction of the residential units has not started.

The applicant Robertson Brothers seeks to construct the residential component of the PUD. The proposed layout was modified slightly but is generally consistent with the approved layout. They seek to add two (2) additional units, bringing the total number of units in the residential component to sixteen (16). The design of the approved PUD was somewhat urban in nature, consistent with the commercial frontage. The applicant seeks to modify the design of the residential units and seeks approval from the Planning Commission on this matter.

PREVIOUS PLANNING COMMISSION REVIEW

The Planning Commission first considered this matter at the June 25, 2013 meeting. At the meeting, the Planning Commission discussed:

- Request to increase the number of units
- Outdoor elements of the site (courtyard, fountain, public art, walnut tree)
- Elevation design (vertical, traditional vs urban, character of site)
- Overall site parking including guest parking

Based on direction from the Planning Commission, the applicant has revised their application:

1. Revise Site Plan to increase overall site residential density from 14 to 16 units.

The residential component was originally approved for 14 units. The applicant is seeking approval to add two (2) additional units. While the number of units will increase by two (2), the overall building envelope (1st floor area) is significantly reduced from what originally approved. The reduction in building envelope has allowed for an increased setback to the north, and more landscape/impervious areas. The applicant has reduced the overall unit size to appeal to a younger professional purchaser. The approved height will remain at 30-stories 33'-4".

Items to be addressed: None

2. Maintain the Outdoor Element.

The central courtyard feature has been greatly improved from the original submission. The courtyard area includes the preservation of a significant Heritage tree, installation of a mix of shrubs, grasses, and deciduous trees, and installation of a common sitting / patio area. The submitted renderings highlight the quality of the central courtyard. In addition, the applicant is installing a rain garden in the northeast corner of the site.

Items to be addressed: None

3. Elevation Design

The applicant has provided an elevation that incorporates elements of both the residential character to the north and the commercial character to the south. The material selection includes full masonry first floor with a mix of horizontal and shake siding on the second and third floors. The design and material selection should provide a nice transition.

Items to be addressed: None

4. Site Parking

In addition to providing a 2-car garage within each unit, the applicant has increased the total amount of guest parking by adding two guest parking units south of the central courtyard. The total amount of guest parking includes 6 Kilmer Drive on-street spaces, 5 internal spaces adjacent to the rain garden and 12 shared spaces with the retail component of the PUD. Most guest parking demand will be weekend and evening, which is the lowest parking demand for the retail component of the PUD.

Items to be addressed: None

PUD STANDARDS

The PUD provisions of the Zoning Ordinance are found in Article 11. The PUD Section provides standards under Section 11.03 for Planning Commission to review.

- 1. A mixture of land uses that would otherwise not be permitted without the use of the PUD provided that other objectives of this Article are also met.**
- 2. A public improvement or public facility (e.g. recreational, transportation, safety and security) which will enhance, add to or replace those provided by public entities, thereby furthering the public health, safety and welfare.**
- 3. A recognizable and material benefit to the ultimate users of the project and to the community, where such benefit would otherwise be infeasible or unlikely to be achieved absent these regulations.**
- 4. Long-term protection and preservation of natural resources, natural features, and historic and cultural resources, of a significant quantity and/or quality in need of protection or preservation, and which would otherwise be unfeasible or unlikely to be achieved absent these regulations.**
- 5. A compatible mixture of open space, landscaped areas, and/or pedestrian amenities.**
- 6. Appropriate land use transitions between the PUD and surrounding properties.**
- 7. Design features and techniques, such as green building and low impact design, which will promote and encourage energy conservation and sustainable development.**
- 8. Innovative and creative site and building designs, solutions and materials.**
- 9. The PUD will reasonably mitigate impacts to the transportation system and enhance non-motorized facilities and amenities.**
- 10. For the appropriate assembly, use, redevelopment, replacement and/ or improvement of existing sites that are occupied by obsolete uses and/or structures.**
- 11. A complementary variety of housing types that is in harmony with adjacent uses.**
- 12. A reduction of the impact of a non-conformity or removal of an obsolete building or structure.**
- 13. A development consistent with and meeting the intent of this Article, which will promote the intent of the Master Plan or the intent of any applicable corridor or sub-area plans. If**

conditions have changed since the Plan, or any applicable corridor or sub-area plans were adopted, the uses shall be consistent with recent development trends in the area.

- 14. Includes all necessary information and specifications with respect to structures, heights, setbacks, density, parking, circulation, landscaping, amenities and other design and layout features, exhibiting a due regard for the relationship of the development to the surrounding properties and uses thereon, as well as to the relationship between the various elements within the proposed Planned Unit Development. In determining whether these relationships have been appropriately addressed, consideration shall be given to the following:***
 - a. The bulk, placement, and materials of construction of the proposed structures and other site improvements.***
 - b. The location and screening of vehicular circulation and parking areas in relation to surrounding properties and the other elements of the development.***
 - c. The location and screening of outdoor storage, loading areas, outdoor activity or work areas, and mechanical equipment.***
 - d. The hours of operation of the proposed uses.***
 - e. The location, amount, type and intensity of landscaping, and other site amenities.***
- 15. Parking shall be provided in order to properly serve the total range of uses within the Planned Unit Development. The sharing of parking among the various uses within a Planned Unit Development may be permitted. The applicant shall provide justification to the satisfaction of the City that the shared parking proposed is sufficient for the development and will not impair the functioning of the development, and will not have a negative effect on traffic flow within the development and/or on properties adjacent to the development.***
- 16. Innovative methods of stormwater management that enhance water quality shall be considered in the design of the stormwater system.***
- 17. The proposed Planned Unit Development shall be in compliance with all applicable Federal, State and local laws and ordinances, and shall coordinate with existing public facilities.***

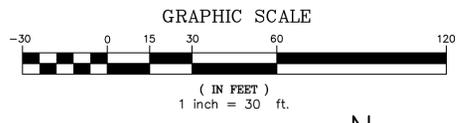
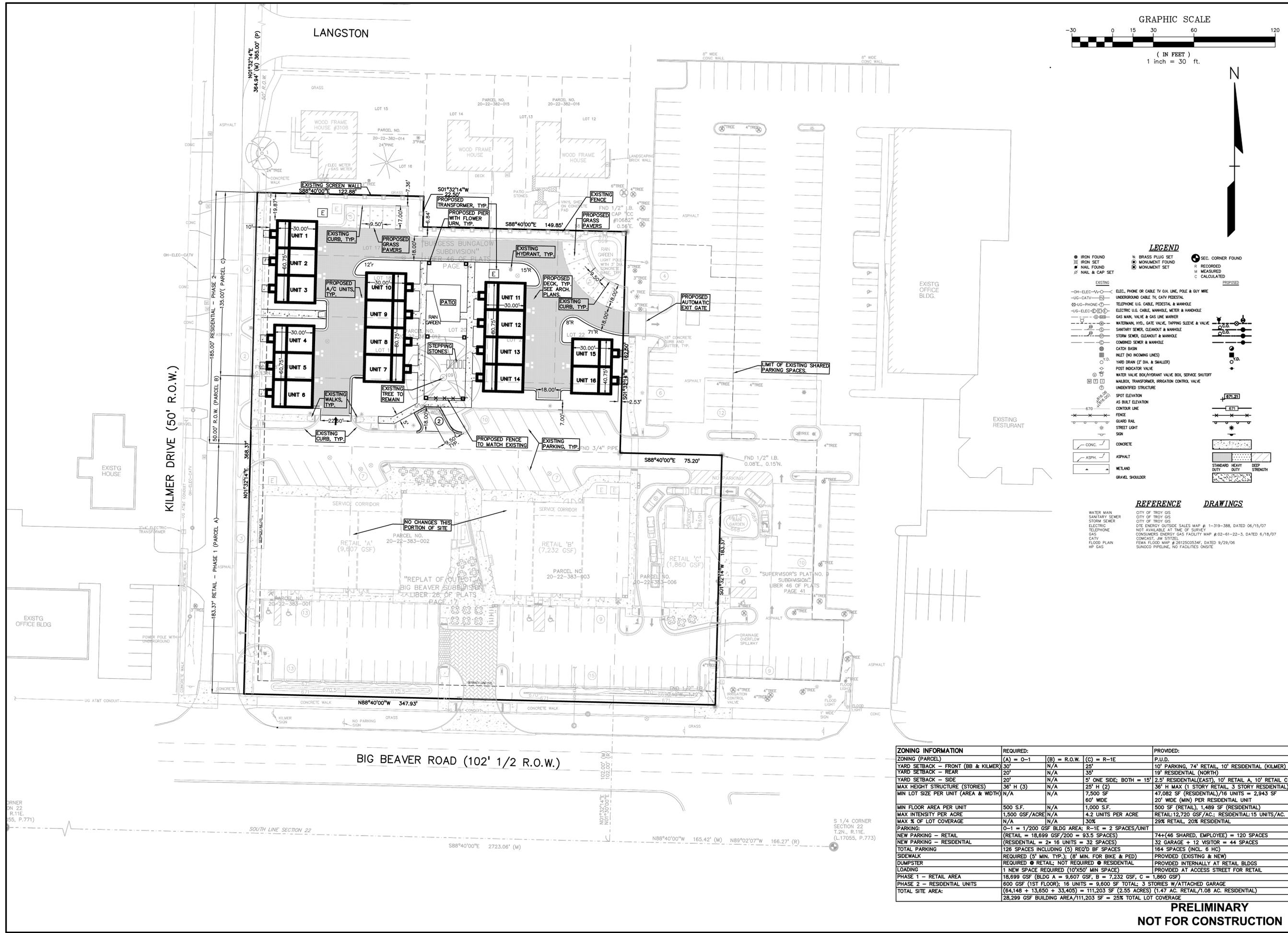
While the number of units will increase by two (2), the overall building envelope (1st floor area) is significantly reduced from what originally approved. The reduction in building envelope has allowed for an increased setback to the north, and more landscape/impervious areas. In addition, the applicant has offset impact of two additional units by providing additional guest parking. Furthermore, the central courtyard is an improved asset to the development. The residential development is compatible to the adjacent established single-family neighborhood to the north and the commercial center to the south, and will serve as a nice transition.

SUMMARY OF FINDINGS

We find that the proposed increase in two units, improvements to the outdoor elements, and increase in guest parking is in compliance from what was originally approved and meets all required PUD Standards. We support the proposed project and believe the project meets or exceeds the minimum requirements. As such we recommend approval.



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP



LEGEND

● IRON FOUND	⊗ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊗ IRON SET	⊗ MONUMENT FOUND	⊙ RECORDED
⊙ NAIL FOUND	⊗ MONUMENT SET	⊙ MEASURED
⊙ NAIL & CAP SET		⊙ CALCULATED

— OH-ELEC-CATV	ELEC. PHONE OR CABLE TV OH. LINE, POLE & GUY WIRE	— UG-CATV	UNDERGROUND CABLE TV, CATV PEDESTAL
— UG-ELEC	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	— UG-ELEC	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
— GAS	GAS MAIN, VALVE & GAS LINE MARKER	— WATER	WATER MAIN, VALVE, GATE VALVE, PIPING, SLEEVE & VALVE
— SANITARY	SANITARY SINKER, CLEANOUT & MANHOLE	— STORM	STORM SINKER, CLEANOUT & MANHOLE
— COMBINED	COMBINED SINKER & MANHOLE	— CATCH	CATCH BASIN
— INLET	INLET (NO INCOMING LINES)	— YARD	YARD DRAIN (2" DIA. & SMALLER)
— POST	POST INDICATOR VALVE	— WATER	WATER VALVE BOX/ANODIZED VALVE BOX, SERVICE SHUTOFF
— MAIL	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	— UNIDENTIFIED	UNIDENTIFIED STRUCTURE
— SPOT	SPOT ELEVATION AS BUILT ELEVATION	— FENCE	FENCE
— CONTOUR	CONTOUR LINE	— GUARD	GUARD RAIL
— STREET	STREET LIGHT	— SIGN	SIGN
— CONC.	CONCRETE	— ASPH.	ASPHALT
— ASPH.	ASPHALT	— METLND	METLAND
— GRVL	GRAVEL SHOULDER		

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS
SANITARY SINKER	CITY OF TROY GIS
STORM SINKER	CITY OF TROY GIS
ELECTRIC	DTE ENERGY OUTSIDE SALES MAP # 1-319-388, DATED 06/15/07
TELEPHONE	NOT AVAILABLE AT TIME OF SURVEY
GAS	CONSUMERS ENERGY GAS FACILITY MAP # 02-61-22-3, DATED 6/18/07
CATV	COMCAST, JM SITZEL
FLOOD PLAN	FEMA FLOOD MAP # 250250534F, DATED 9/29/06
HP GAS	SUNOCO PIPELINE, NO FACILITIES ONSITE

REVISIONS

NO.	BY	CHK	DESCRIPTION	DATE
1	RLS	DNH	AMENDED P.U.D. SUBMITTAL - REVISED RESIDENTIAL	8/4/13
2	RLS	DNH	REVISED SCREEN WALL PER CITY COMMENTS	4/29/09
3	RLS	DNH	REVISED SCREEN WALL AND PER CITY COMMENTS	4/27/09
4	RLS	DNH	PRELIMINARY DEVELOPMENT PLAN SUBMITTAL	7/10/09
5	RLS	DNH	REVISED PER CITY COMMENTS	7/10/09
6	RLS	DNH	REVISED PER CITY COMMENTS	11/04/09
7	RLS	DNH	REVISED PER CITY COMMENTS	11/04/09
8	RLS	DNH	REVISED PER CITY COMMENTS	10/20/08

CAUTION!
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ROBERTSON BROTHERS
6905 TELEGRAPH ROAD SUITE 200
BLOOMFIELD HILLS, MI 48301

**PRELIMINARY SITE PLAN
BIG BEAVER AND KILMER DEV.**
PART OF THE SW 1/4 OF SECTION 22, T. 2 N., R. 11 E.,
CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN

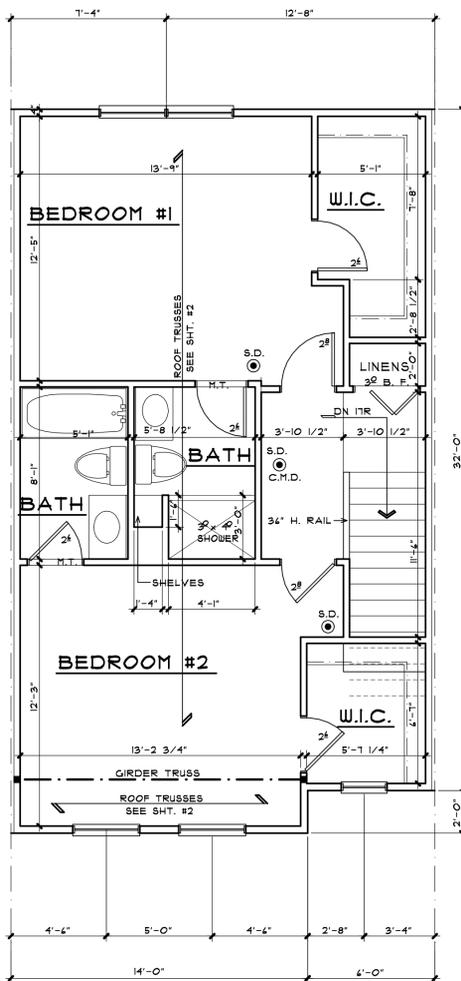
DES. RLS SUR. KTR P.M. DNH
DNH SUR. KTR P.M. DNH
AREE: DWG/CONCEPTUAL/PHASE 02102.DWG

ORIGINAL ISSUE DATE: MAY 15, 2008
PEA JOB NO. 2007-101

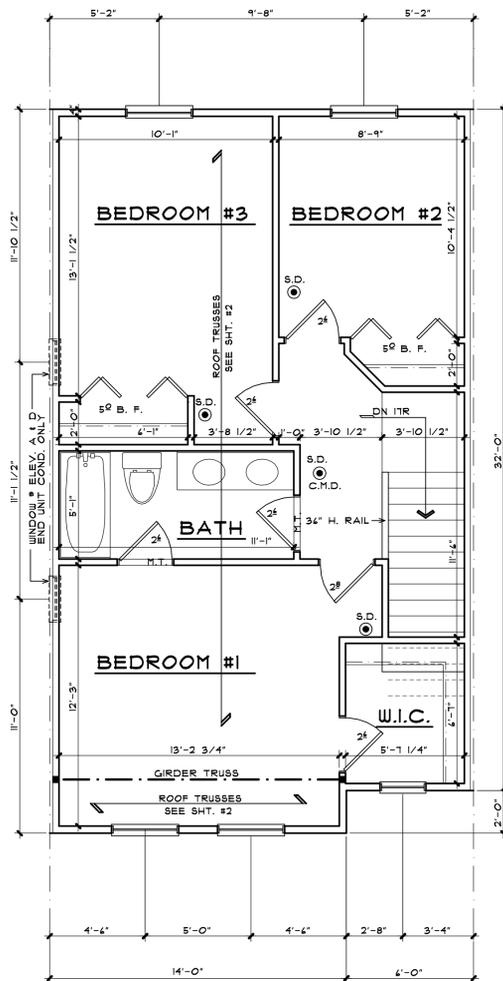
SCALE: 1" = 30'
DRAWING NUMBER:
C-2

ZONING INFORMATION	REQUIRED:	PROVIDED:
ZONING (PARCEL)	(A) = 0-1 (B) = R.O.W. (C) = R-1E	P.U.D.
YARD SETBACK - FRONT (BB & KILMER)	30'	10' PARKING, 74' RETAIL, 10' RESIDENTIAL (KILMER)
YARD SETBACK - REAR	20'	19' RESIDENTIAL (NORTH)
YARD SETBACK - SIDE	20'	5' ONE SIDE; BOTH = 15'
MAX HEIGHT STRUCTURE (STORIES)	36' H (3)	36' H MAX (1 STORY RETAIL, 3 STORY RESIDENTIAL)
MIN LOT SIZE PER UNIT (AREA & WIDTH)	N/A	47,082 SF (RESIDENTIAL)/16 UNITS = 2,943 SF
MIN FLOOR AREA PER UNIT	500 S.F.	20' WIDE (MIN) PER RESIDENTIAL UNIT
MAX INTENSITY PER ACRE	1,500 GSF/ACRE	500 SF (RETAIL), 1,489 SF (RESIDENTIAL)
MAX % OF LOT COVERAGE	N/A	RETAIL: 12,720 GSF/AC.; RESIDENTIAL: 15 UNITS/AC.
PARKING - RETAIL	0-1 = 1/200 GSF BLDG AREA; R-1E = 2 SPACES/UNIT	29% RETAIL, 20% RESIDENTIAL
NEW PARKING - RETAIL	(RETAIL = 18,699 GSF/200 = 93.5 SPACES)	744 (48 SHARED, EMPLOYEE) = 120 SPACES
NEW PARKING - RESIDENTIAL	(RESIDENTIAL = 24 16 UNITS = 32 SPACES)	32 GARAGE + 12 VISITOR = 44 SPACES
TOTAL PARKING	128 SPACES INCLUDING (5) REQ'D BF SPACES	164 SPACES (INCL. 6 HC)
SIDEWALK	REQUIRED (5' MIN. TYP.); (8' MIN. FOR BIKE & PED)	PROVIDED (EXISTING & NEW)
DUMPSTER	REQUIRED ● RETAIL; NOT REQUIRED ● RESIDENTIAL	PROVIDED INTERNALLY AT RETAIL BLDGS
LOADING	1 NEW SPACE REQUIRED (10'X50' MIN SPACE)	PROVIDED AT ACCESS STREET FOR RETAIL
PHASE 1 - RETAIL AREA	18,699 GSF (BLDG A = 9,607 GSF, B = 7,232 GSF, C = 1,860 GSF)	
PHASE 2 - RESIDENTIAL UNITS	600 GSF (1ST FLOOR); 16 UNITS = 9,600 SF TOTAL; 3 STORIES W/ ATTACHED GARAGE	
TOTAL SITE AREA:	(84,148 + 13,650 + 33,405) = 111,203 SF (2.55 ACRES) (1.47 AC. RETAIL/1.08 AC. RESIDENTIAL)	
	28,299 GSF BUILDING AREA/111,203 SF = 25% TOTAL LOT COVERAGE	

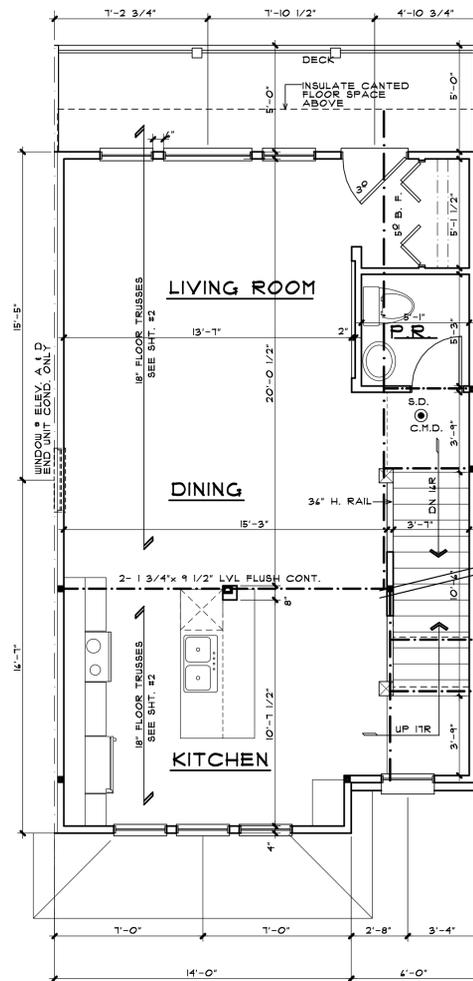
**PRELIMINARY
NOT FOR CONSTRUCTION**



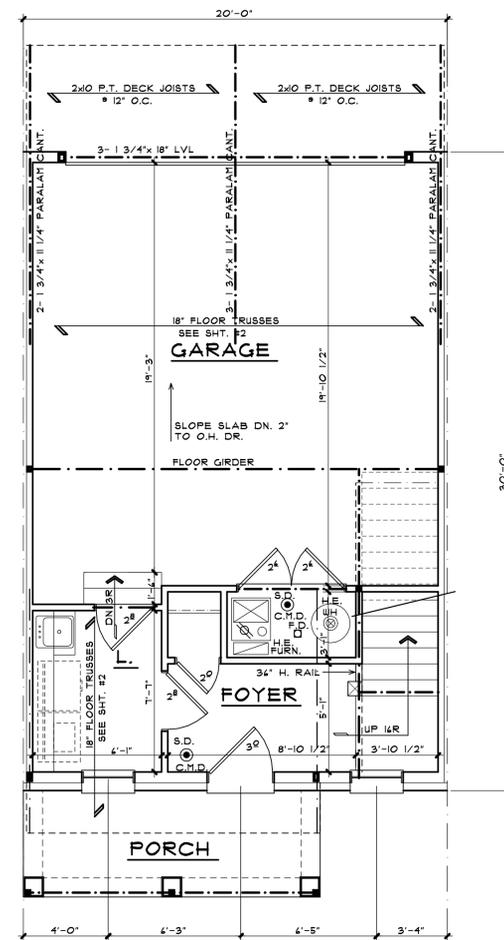
THIRD FLOOR PLAN
2 BEDRM PLAN SCALE : 1/4" = 1'-0"



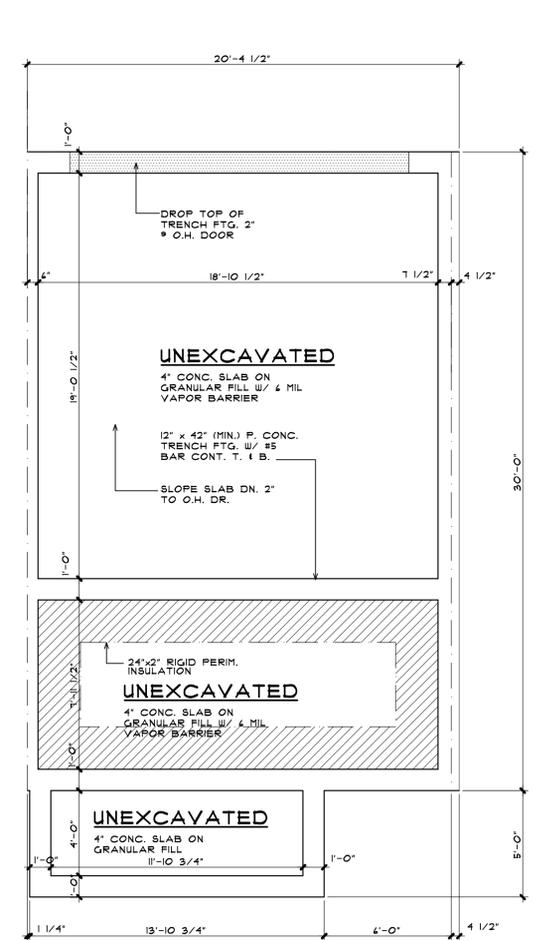
THIRD FLOOR PLAN
 ELEV. A & ELEV. B SCALE : 1/4" = 1'-0"



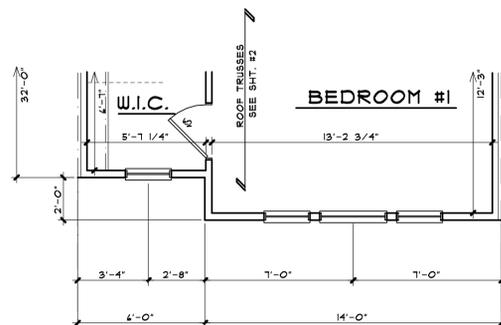
SECOND FLOOR PLAN
 ELEV. B (ELEV. D OPPOSITE) SCALE : 1/4" = 1'-0"



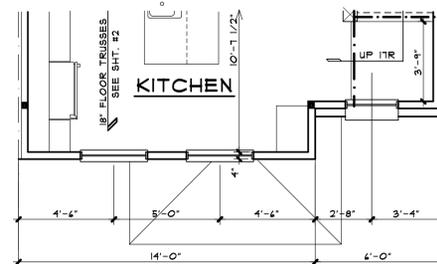
FIRST FLOOR PLAN
 ELEV. B (ELEV. C OPPOSITE) SCALE : 1/4" = 1'-0"



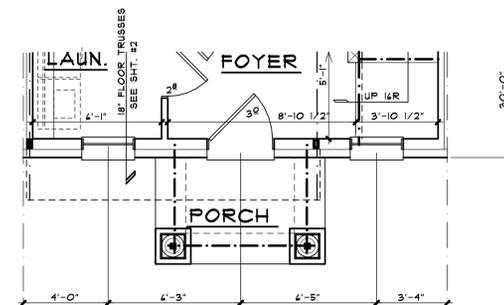
FOUNDATION PLAN
 ELEV. B (ELEV. C OPPOSITE) SCALE : 1/4" = 1'-0"



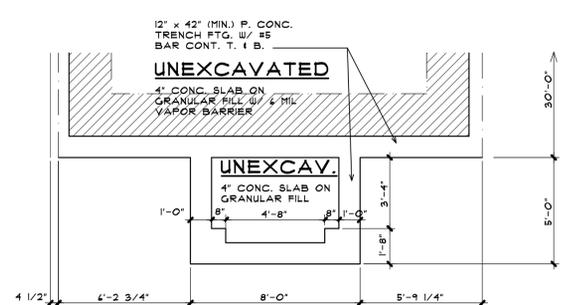
THIRD FLOOR PLAN
 ELEV. C SCALE : 1/4" = 1'-0"



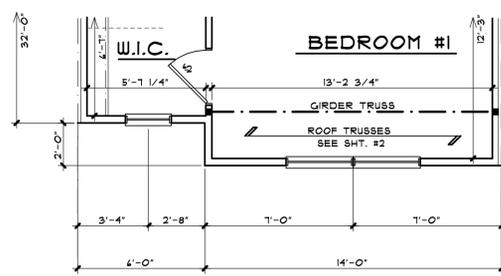
SECOND FLOOR PLAN
 ELEV. A (ELEV. C OPPOSITE) SCALE : 1/4" = 1'-0"



FIRST FLOOR PLAN
 ELEV. A (ELEV. D OPPOSITE) SCALE : 1/4" = 1'-0"



FOUNDATION PLAN
 ELEV. A (ELEV. D OPPOSITE) SCALE : 1/4" = 1'-0"



THIRD FLOOR PLAN
 ELEV. D SCALE : 1/4" = 1'-0"

SQUARE FOOTAGE	
1ST FLOOR	193 SQ. FT.
2ND FLOOR	628 SQ. FT.
3RD FLOOR	668 SQ. FT.
TOTAL	1489 SQ. FT.

Alexander V. Bogaerts + Associates, P.C. • Architecture • Planning • Interior Design
 2445 Franklin Road
 Bloomfield Hills, MI 48302
 248-334-5000

CLIENT/PROJECT
ROBERTSON BROTHERS
 KILMER PLACE TOWNHOMES
 TROY, MICHIGAN

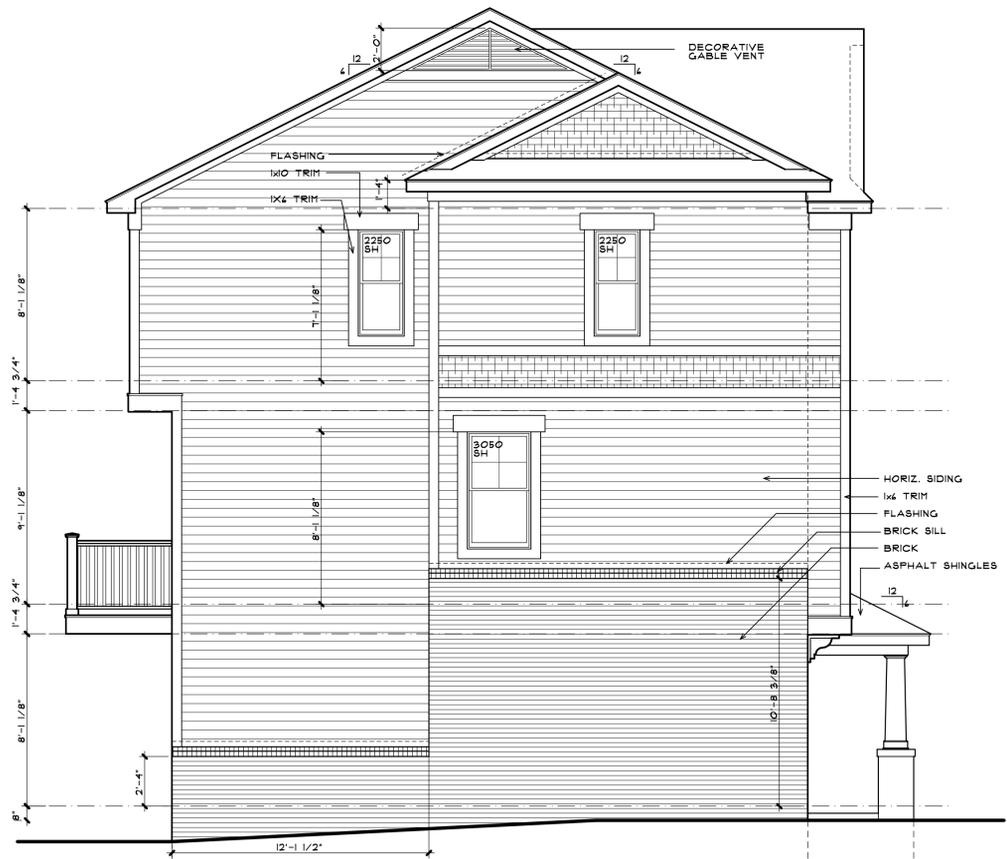
SHEET TITLE
FLOOR PLANS
 PRELIMINARY

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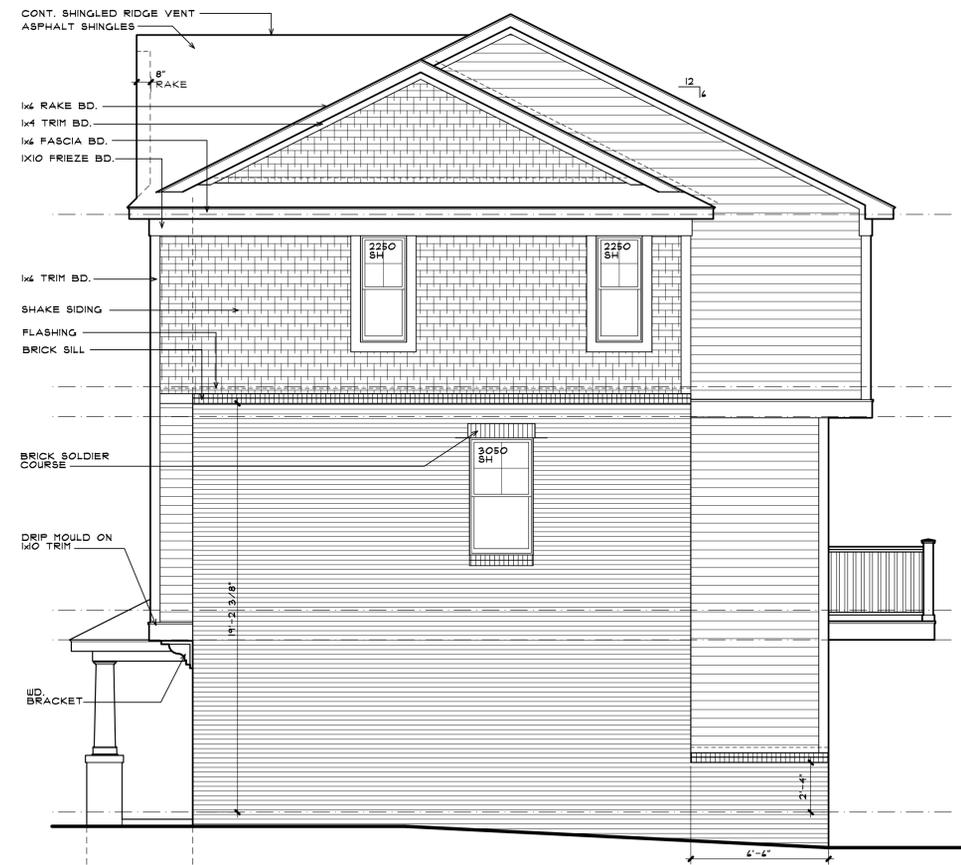
- PRELIMINARY
- BIDS
- PERMITS
- CONSTRUCTION

REVISIONS
 8-9-13

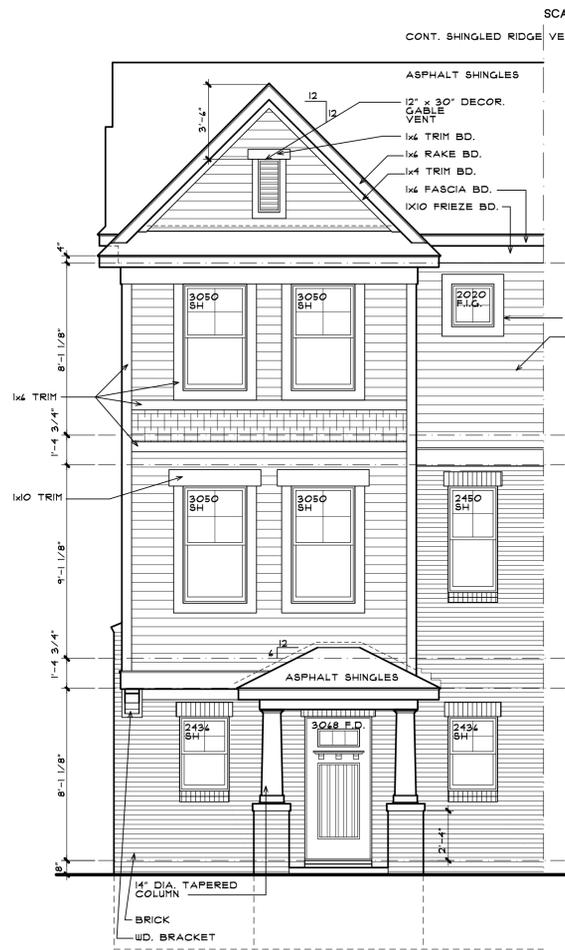
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 SHEET NUMBER



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION



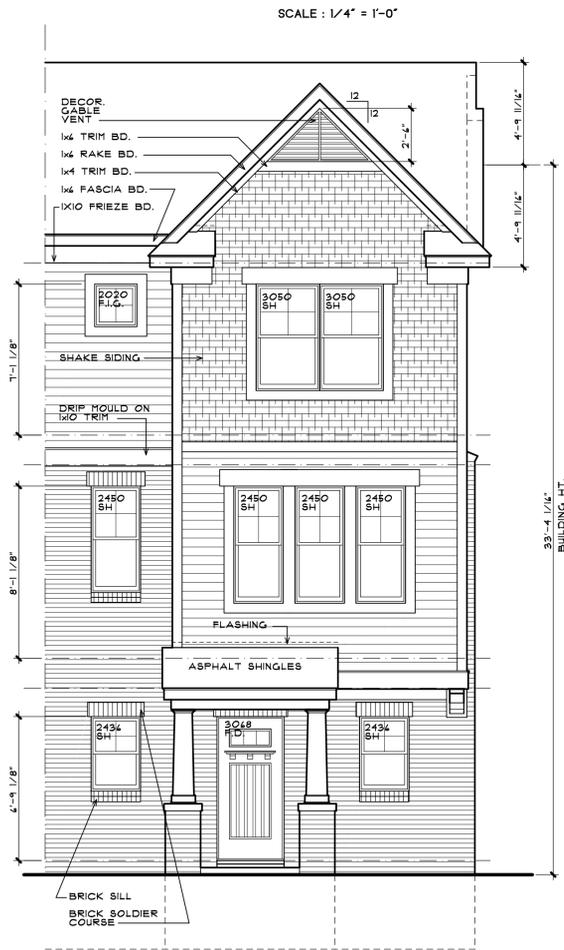
FRONT ELEVATION 'A'



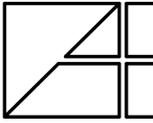
FRONT ELEVATION 'B'



FRONT ELEVATION 'C'



FRONT ELEVATION 'D'



Robertson Brothers
 ELEVATIONS
 PRELIMINARY

CLIENT/PROJECT
ROBERTSON BROTHERS
 KILMER PLACE TOWNHOMES
 TROY, MICHIGAN

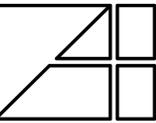
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PRELIMINARY
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 PERMITS
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ELEVATIONS
 PRELIMINARY

ROBERTSON BROTHERS
 KILMER PLACE TOWNHOMES
 TROY, MICHIGAN

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PRELIMINARY

09-27-12

BIDS

PERMITS

CONSTRUCTION

REVISIONS

8-9-13

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JOB NUMBER

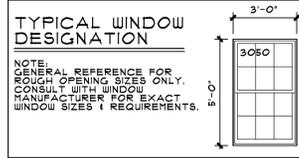
DATE

SHEET NUMBER

3

EGRESS WINDOW

NOTE:
 EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE. THE UNIT(S) MUST BE OPERABLE FROM THE INSIDE TO A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. WHERE WINDOWS ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE, THEY SHALL HAVE SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. ALL EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES AND WIDTH OF 20 INCHES.



STEEL LINTEL SCHEDULE

LOOSE STEEL LINTELS FOR MASONRY - EXTERIOR ANGLES FOR BRICK OR STONE (NO FLOOR LOAD)

MAX. CLEAR SPAN	LINTEL SIZE
5'-0" OR LESS	3 1/2" x 3 1/2" x 5/16"
7'-0" OR LESS	4" x 3 1/2" x 5/16"
8'-0" OR LESS	5" x 3 1/2" x 5/16"
9'-0" OR LESS	5" x 3 1/2" x 3/8"
10'-0" OR LESS	4" x 3 1/2" x 3/8"

NOTE: THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS AND/OR ELEVATIONS.
 NOTE: STEEL ANGLE LINTELS REQUIRE A SHOP COAT OF RUST-INHIBITIVE PAINT EXCEPT FOR LINTELS MADE OF CORROSION-RESISTANT STEEL.

OVERHANGS & DRAINAGE

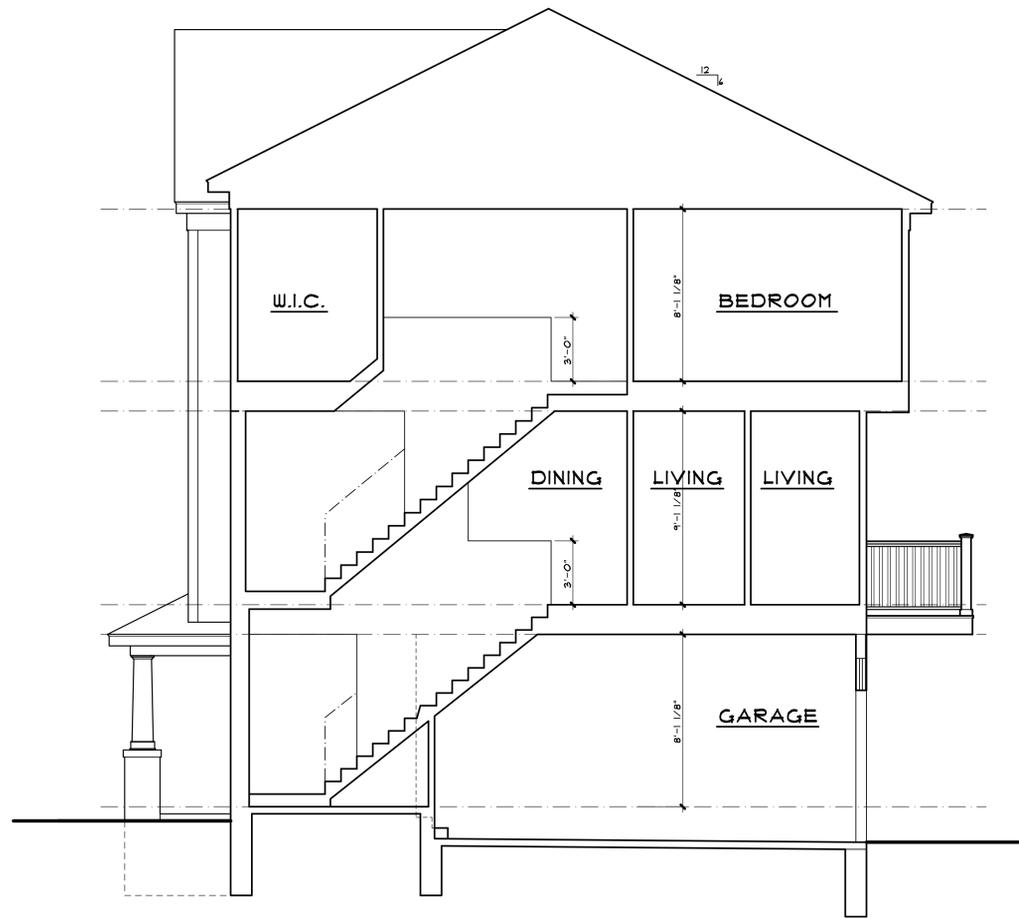
PROVIDE GUTTERS & DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE LOCATED SO THAT THE DISCHARGE WILL NOT SPILL ON OR FLOW ACROSS ANY PORCHES, WALKS OR DRIVES.

UNLESS NOTED OTHERWISE OVERHANG DIMENSIONS ARE 6" AT BRICK AND 12" AT SIDING. RAKE DIMENSIONS ARE 4" AT BRICK AND 4" AT SIDING.

WINDOW SILLS

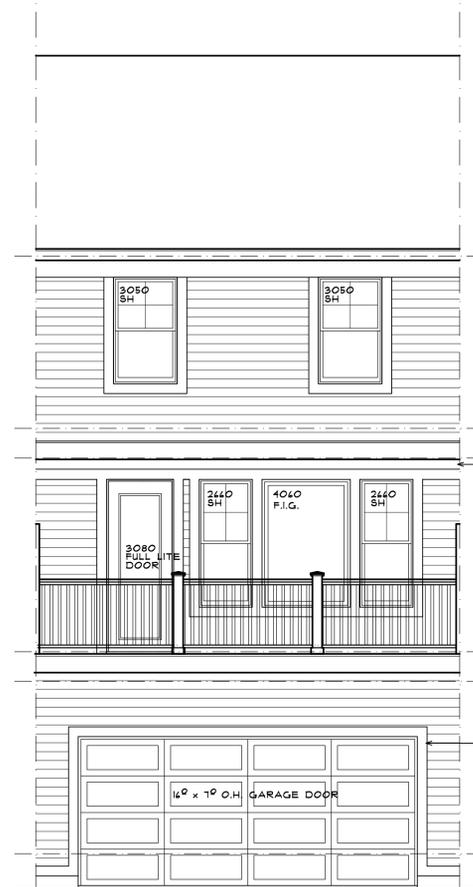
IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 12" ABOVE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. GLAZING BETWEEN THE FLOOR AND 24" SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4 INCH DIAMETER SPHERE CANNOT PASS.

EXCEPTIONS:
 1. WINDOWS WHOSE OPENINGS WILL NOT ALLOW A 4" DIA. SPHERE TO PASS THROUGH THE OPENING WHERE THE OPENING IS IN ITS LARGEST OPENED POSITION.
 2. OPENINGS THAT ARE PROVIDED WITH WINDOW GUARDS THAT COMPLY WITH ASTM F 2004 OR F 2090.



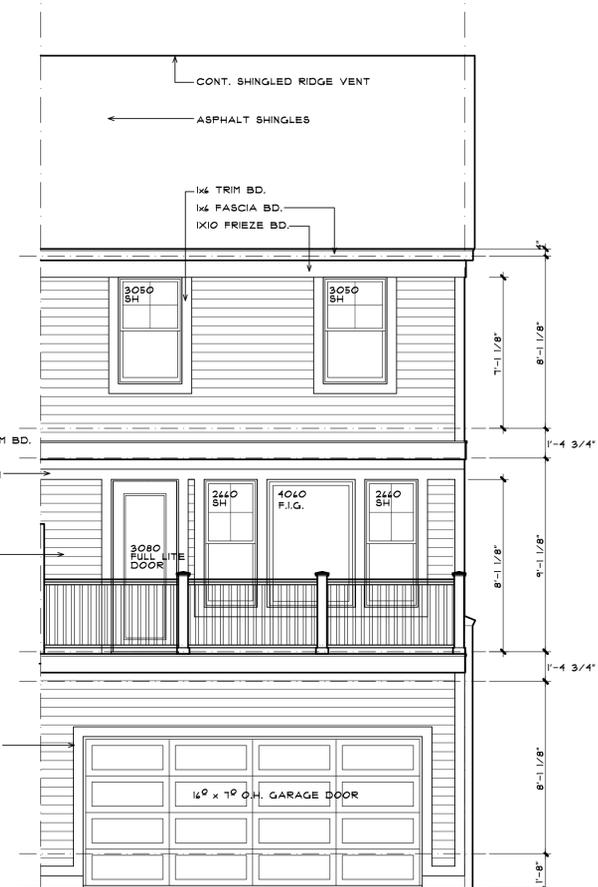
BUILDING SECTION

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



REAR ELEVATION

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



REAR ELEVATION

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





Job Name:

Job Type:

Comments:

Quantity:

Product Number: 8988PBLE-155

Dimensions:



Width: 5 3/4"
 Height: 9"

Extends: 4 1/2"

Wire: 6 1/2"

Switch Type: N/A

Mounting Proc.: Cap Nuts

Outlet Box: Mounted To Box

Bulbs:

1 - GU24 Self Ballasted 13w max 120v - included

Material List:

1 Body - Die Cast Aluminum - Pewter

Safety Listing:

UL Listed for Wet Locations
 cUL Listed for Wet Locations

Instruction Sheets

French (F-009)
 English (A-779)
 English (HC-550)

8988PBLE-155 - Single-Light Mullberry Hill Fluorescent Lantern

Collection: Mulberry Hill

One Light Outdoor Wall Fixture in Pewter Finish with White Flat Glass. Decorative Panel Molding.

Fluorescent outdoor wall lantern in white finish over cast aluminum. An ENERGY STAR Qualified fluorescent fixture. Photocell included. Ref. fix. 8988L-155

UPC #: 785652898068

Product Type: Outdoor Wall Lantern

Finish: Pewter (155)

Features:

Clear Bulb Recommended Energy Star Compliant
 Photocell Powder Coat Finish
 Title 24

Shade / Diffuser												
Part	Material	Finish	Quantity	Item Number	Length	Width	Height	Diameter	Fitter Diameter	Shade Top Length	Shade Top Width	Shade Top Diameter
Panel	Glass	Smooth White	1			3	5					
Panel	Glass	Smooth White	1			3 3/16	5 1/16					
Panel	Glass	Smooth White	1			3 3/16	5 1/16					

Backplate / Canopy						
Type	Height/Length	Width	Depth	Diameter	Outlet Box Up	Outlet Box Down
Back Plate					5 11/16	3 1/16

Replacement Bulb Data:										
Product #	Type	Base	Watts	Watts Consumed	Volts	Hours	Lumens	Temp (°K)	CRI	
97102			13		120v	10000	900	2700	81	

Shipping Information									
Package Type	Quantity	UPC	Length	Width	Height	Cube	Weight	UPS Ship	Label
Individual	1	785652898068	6.5	5.5	9.25	0.191	1.9	Yes	F E-1 IP

Master Pack	6	10785652898065	17.25	14	10.5	1.467	13.75	Yes	
NJ Pallet	216		48	40	70	77.778	495	No	
NV Pallet	216		48	40	70	77.778	495	No	













Proposed Exterior Color Package for Kilmer Place

Heritage Roof Shingles Color: Weather Wood

Amherst Vinyl Siding Color: Wicker

Amherst Siding Color: Pebble

Brick Color: St. Augustine

Door Stain Color: American Walnut

Gutters: Wicker

Trim Color: SW7006 Extra White

TAMKO

HERITAGE Premium

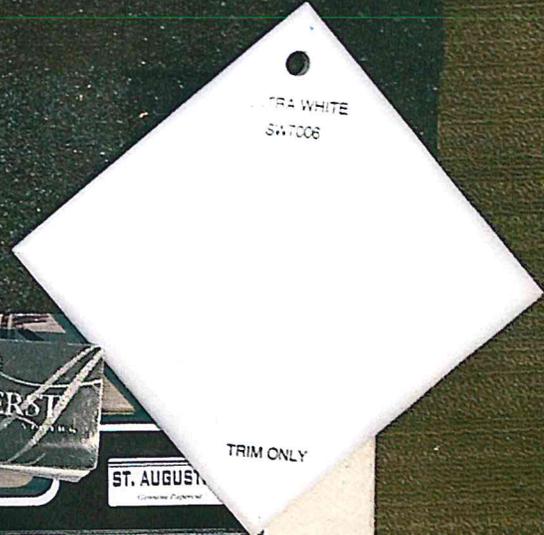
LAMINATED ASPHALT SHINGLES

HERITAGE

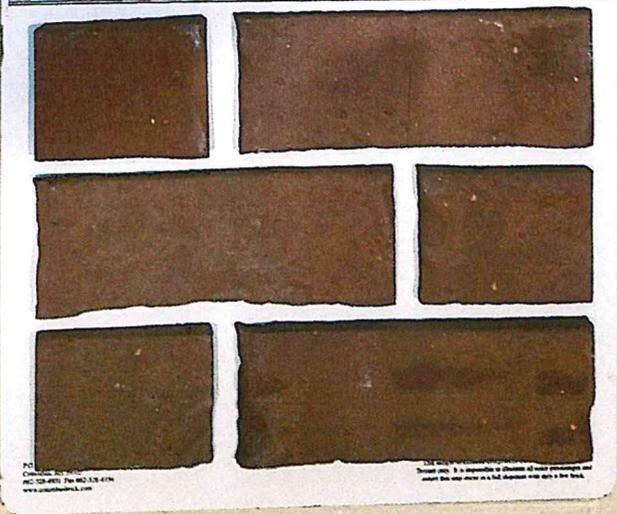
LAMINATED ASPHALT SHINGLES



Featured Color:
Weathered Wood

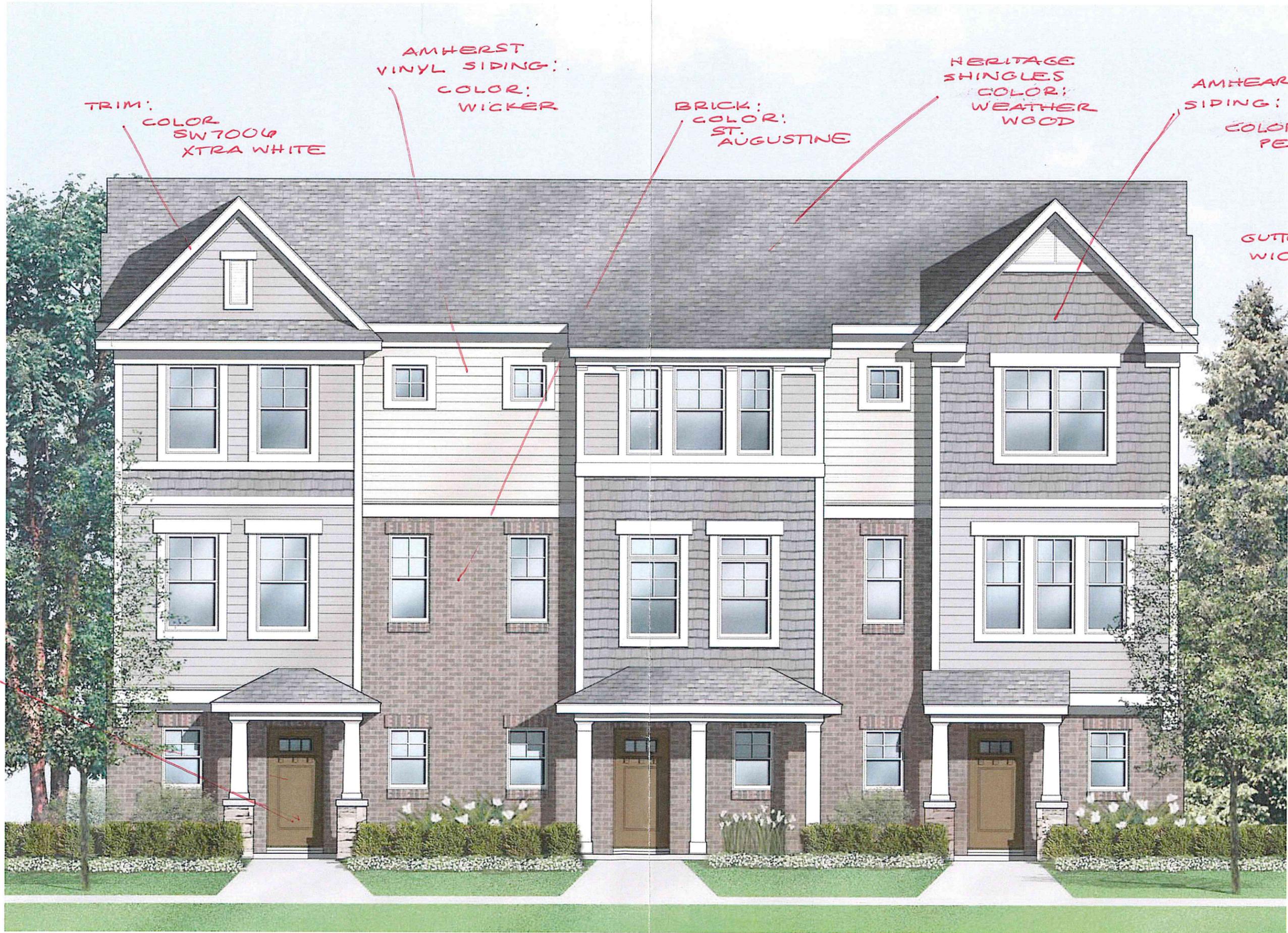


ST. AUGUSTINE



PO
Charlotte, NC 28217
MC 128-4811 Fax MC 128-4776
www.tamkoshingles.com

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TRIM:
COLOR
SW7004
XTRA WHITE

AMHERST
VINYL SIDING:
COLOR:
WICKER

BRICK:
COLOR:
ST.
AUGUSTINE

HERITAGE
SHINGLES
COLOR:
WEATHER
WOOD

AMHEARST
SIDING:
COLOR:
PEBBLE

GUTTERS:
WICKER.

STAINED
DOORS:
AMERICAN
WALNUT



Kilmer Place Narrative

On June 25, 2013 Robertson presented its proposed revisions to the residential portion of the Big Beaver Kilmer Planned Unit Development to a special study meeting of the Planning Commission. Attached you will find a revised application and revised plans that reflect the comments we noted from the June meeting. The application does not include a new wetlands detention or a tree preservation plan because the site has already been developed. The request is to increase the total number of homes to 16 from the prior approval and to modify the exterior elevations and building orientations on the site plan. The proposed changes are shown on the enclosed site plan and elevations and are as noted below:

Site Plan:

- The residential component was originally approved for 14 larger units. Robertson's first submission was for 17 units and has been revised to 16 units.
- The approved residential GSF was 13,727 (1st Floor). The revised plan eliminated one unit reducing the GSF by 600 square feet for a total proposed residential GSF of 9600 square feet.
- Building height no change, 3 story 33-4" mid-point.
- The revised plan has added two additional parking spaces as requested.
- Sidewalks located on the south side of the residential have been relocated from the original plan and some have been eliminated to provide for a landscape buffer zone to the retail.
- Approved setback 10.35' provided 19.87'
- The court yard area and overall landscaping has been revised and improved from our original submission.
- The rain garden has been preserved on the new site plan.
- The park common area with the Heritage tree has been expanded.

Elevations:

- The character of the elevations has been re-directed to relate more to the residential influences to the north than to the retail fronting Big Beaver. The colors on the elevations have been revised to match more closely with the retail and additional brick has been added to the front elevations as requested.
- The overall size of the units has been reduced to appeal to our assessment of the younger professional buyer in the Troy market.
- The elevations call for a full masonry first floor with a mix of horizontal and shake siding on the second and third levels.



DATE: September 17, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PRELIMINARY SITE PLAN REVIEW (File Number SP 985) – Proposed Oakland Troy Senior Project, Southeast Corner of Square Lake and Adams, Section 20, Currently Zoned R-1A (One Family Residential) District

The petitioner Windemere of Troy Land Holdings LLC submitted the above referenced Preliminary Site Plan Approval application for a 92 bed assisted living/memory care facility within the R-1A One Family Residential District. The site is presently vacant.

The Planning Commission is responsible for granting Preliminary Site Plan Approval for this item.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

G:\SITE PLANS\SP 985 Oakland Troy Senior Project\SP-985 PC Memo 09 24 2013.docx

PRELIMINARY SITE PLAN REVIEW

PRELIMINARY SITE PLAN REVIEW (File Number SP 985) – Proposed Oakland Troy Senior Project, Southeast Corner of Square Lake and Adams, Section 20, Currently Zoned R-1A (One Family Residential) District

Resolution # PC-2013-09-

Moved by:

Seconded by:

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Oakland Troy Senior Project, located on the southeast corner of Square Lake and Adams, Section 20, within the R-1A (One Family Residential) district, be

(granted, for the following reasons: _____) or

(denied, for the following reasons: _____) or

(postponed, for the following reasons: _____)

1. Consider alternative site arrangements.
2. Relocate/reconfigure parking to meet setback requirements.
3. Address the recommendations of the Traffic Consultant's review.
4. Provide pedestrian connection from Square Lake to the main entrance.
5. Planning Commission to determine if 64 parking spaces are sufficient.
6. Provide bicycle parking rack.
7. Install one (1) landscape peninsula within the twenty-six (26) spaces on the south side of the property.
8. Indicate exact landscape species and size.
9. Provide trash enclosure screening details.
10. Confirm if building lighting is full cut-off or fully shielded.

Yes:

No:

MOTION CARRIED/FAILED



Legend:

251 0 126 251 Feet

Scale 1: 1,508

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: 8/21/2013



Legend:

Form Based Zoning (Current)

- (PUD) Planned Unit Development
- (CF) Community Facilities District
- (EP) Environmental Protection District
- (BB) Big Beaver Road (Form Based)
- (MR) 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
- (MF) Multi-Family Residential
- (MHP) Manufactured Housing
- (UR) Urban Residential
- (RC) Research Center District
- (PV) Planned Vehicle Sales

377 0 188 377 Feet

Scale 1: 2,262



CARLISLE

WORTMAN
associates, inc.

605 S. Main Street, Ste. 1
Ann Arbor, MI 48104

(734) 662-2200
(734) 662-1935 Fax

Date: August 26, 2013

Preliminary Site Plan Review For City of Troy, Michigan

Applicant:	Windemere of Troy Land Holdings LLC
Project Name:	Oakland
Plan Date:	09/13/2013
Location:	Southeast corner of Square Lake Road and Adams Road
Zoning:	R-1A
Action Requested:	Preliminary Site Plan Approval
Required Information:	Deficiencies noted

PROJECT AND SITE DESCRIPTION

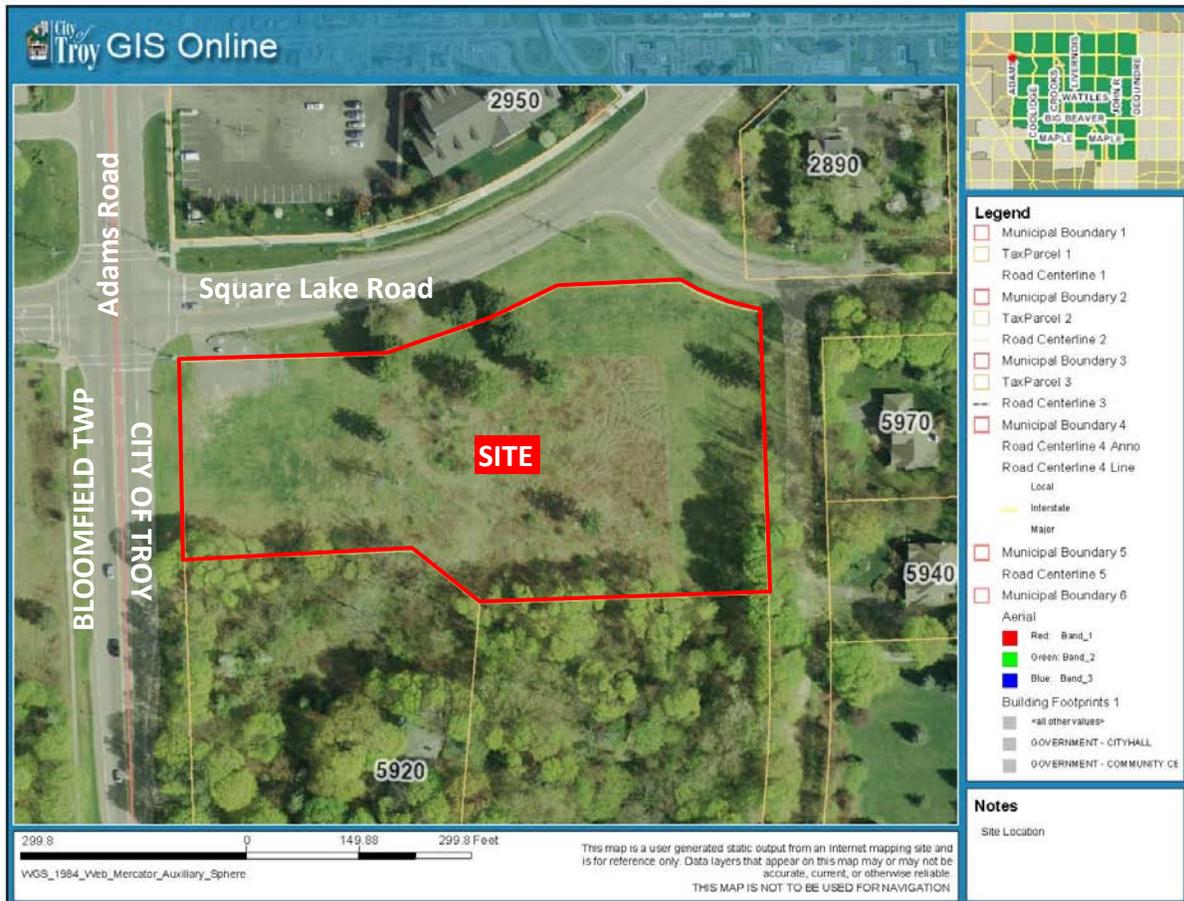
The applicant is proposing a 92-bed assisted living/memory care facility for the 3.26 acre parcel zoned One Family Residential R-1A. The R-1A District is intended to preserve and improve upon the quality of residential neighborhoods while permitting a limited number of other compatible uses which support residential neighborhoods. Senior assisted living is permitted in the R1-A district.

The site is currently unimproved and slopes gradually from the south west to the north east. The property is located off Adams Road, the municipal boundary between the City of Troy and Bloomfield Township to the west.

Location of Subject Property:

The property is located at the southeast corner of Adams and Square Lake Road.

Approximate Location of Site Development



Source: City of Troy GIS Online 2013

Size of Subject Property:

The property is 3.26 acres.

Current Use of Subject Property:

The site is currently unimproved.

Current Zoning:

The property is located in a One Family Residential District R-1A.

Surrounding Property Details:

Direction	Zoning	Use
North	R-1A One Family Residential	Commercial/Office
South	R-1A One Family Residential	Single family residential

East	R-1A One Family Residential	Single family residential
West	R-3 Single Family Residential (Bloomfield Twp)	Single family residential

NATURAL RESOURCES

Topography – A topographic map is provided. The site slopes upward slightly downward towards the east. A small, shallow basin is located on the parcel south of the site.

Woodlands – The engineering site plan and tree preservation plan indicates that there is relatively little tree cover on the site. Of the twelve (12) trees on the site, seven (7) are slated for removal, two of which are dead.

Wetlands - According to the National Wetlands Inventory map for the area, the subject site does not contain wetlands.

Items to be addressed: *None.*

SITE ARRANGEMENT

The Oakland Troy Senior Project is a two-story building with a partial basement. It is centered on the site with parking distributed along Square Lake, Adams, and in rear of the building. The proposed site plan indicates a driveway off Square Lake Road and another off Adams Road.

Overall we find that the site layout seems inefficient. We understand that building layout is dictated by senior living programming needs; however based on the size of the parcel there are opportunities to better utilize the site including:

- Consolidate parking. Most of the provided parking is for staff. Such parking can be consolidated and does not need to be spread around the building. In addition, the parking along Square Lake and Adams Road is located within required front yard setback and must be revised/relocated.
- Move building closer to Adam/Square Lake intersection. This would create a better presence on that intersection and move parking, drive-aisles, and other building operations away from the adjacent single-family properties to the south and east.
- Remove the full-service drive around the building. Based on the applicant's indication of limited site traffic and loading needs there might not be a need for a full-service drive around the entire building. The drive-aisle to the northwest of the building adjacent to the Adams/Square Lake intersection may be able to be removed.

We find that the site is of sufficient size to accommodate the desired building layout and all other development considerations the applicant is requesting. More efficient site planning will reduce unnecessary impervious surface and reduce impact upon adjacent single-family properties.

Items to be Addressed: *Consider alternative site arrangements.*

AREA, WIDTH, HEIGHT, SETBACKS

Required and Provided Dimensions:

Per Section 6.25 Senior Assisted/Independent/Living/Congregate, applicant shall apply the height, lot coverage, and setback requirements of the Multiple Family Residential District as set forth in Section 4.08. Requirements and the proposed dimensions are as follows:

	<u>Required:</u>	<u>Provided:</u>	<u>Compliance:</u>
Front	30 feet	+62 feet	Complies
Rear	30 feet	45 feet	Complies
Parking front	30 feet	20 feet on Adams and Arlund Way Road, and 28 feet on Square Lake	Non-Compliant
Parking rear	20 Feet	20 feet	Complies
Lot Width	120 feet	195+ feet	Complies
Maximum Height	25 feet (2 stories)	25 feet (mid-point of roof)	Complies
Maximum Lot Area Covered by Buildings	35%	22%	Complies
Site Area per Bed*	1,500 square feet	1,543 square feet	Complies

The 11-space parking area along Adams Road and 14-space parking area along Square Lake and Arlund Way Road encroach into the required 30-foot front yard. These parking areas must be revised/relocated to meet setback requirements.

Items to be addressed: *Reconfigure parking to meet setback requirements.*

SITE ACCESS AND CIRCULATION

The primary site access will be off Square Lake Road, with a secondary service access off Adams Road. Access has been reviewed by the City's Traffic Engineering Consultant, OHM, who recommends the following access considerations:

- Provide ADA-compliant sidewalk ramps at all areas where the sidewalk crosses or adjoins the parking lot or driveway.
- Indicate if internal traffic circulation signage will be used.
- Provide the AM and PM peak hour trips to allow for an analysis of the traffic impact.
- Square Lake Road Improvements: Extend the center turn lane along Square Lake Road through the site driveway so that the site traffic can make left turns without blocking the westbound through traffic and for the storage of left turning vehicles. With the existing roadway geometry, the site driveway at Square Lake Road will be located just east of the end of the left turn lane taper for the westbound left turn lane at the intersection of Square Lake Road and Adams Road.

Pedestrian

The applicant shows an 8-foot sidewalk along Adams and Square Lake and a 5-foot sidewalk along Arlund Way. Though the pedestrian traffic to the site may be limited, there should be a pedestrian connection from Square Lake to the main entrance.

Items to be addressed: 1). Address the recommendations of the Traffic Consultant’s review; and 2). Provide pedestrian connection from Square Lake to the main entrance.

PARKING

Section 13.06 provides the following parking requirements:

	Required	Provided	Compliance
One (1) space for each 0.65 dwelling unit plus One (1) space for each employee at peak shift hours.	58 bed spaces + 30 employee spaces = 88 total spaces	64 spaces	Non-Compliant
Barrier Free	4	4	Compliant
Bicycle Parking	2	0	Non-Compliant
Loading	0	1	Compliant

The applicant is seeking a parking deviation of twenty-four (24) spaces. The Planning Commission is able to grant such deviation provided that the applicant supply evidence that the site provides a sufficient number of parking spaces to accommodate the use. The applicant has provided a letter noting that have a similar facility with seventy-four (74) beds and forty-five (45) spaces. Based on a 92-bed facility, they find that the provided sixty-four (64) spaces are sufficient.

The Code encourages the reduction in unnecessary additional land consumption and impervious surface. The Planning Commission shall determine based on the letter provided by the applicant if the sixty-four (64) parking spaces are sufficient.

A bicycle parking rack is required by ordinance.

Items to be addressed: 1). Planning Commission to determine if 64 parking spaces are sufficient; and 2). Provide bicycle parking rack.

LANDSCAPING

The landscape requirements are regulated by Section 13.02.

	Required:	Provided:	Compliance:
Greenbelt Trees	One deciduous tree for every	17 trees	Complies

(Square Lake Road)	30 lineal feet. 504 feet = 16.8 trees		
Greenbelt Trees (Adams Road)	One deciduous tree for every 30 lineal feet. 195 feet = 6.5 trees	6 trees	Complies
Greenbelt Trees (Arlund Way)	One deciduous tree for every 30 lineal feet. 85 feet = 2.8 trees	3 trees	Complies
Greenbelt Trees (Sussex Drive)	One deciduous tree for every 30 lineal feet. 274 feet = 9.2 trees	10 trees	Complies
Landscape Buffer (South property line)	One narrow evergreen tree per three lineal feet. 163 feet = 54.3 trees	54 trees	Complies
	One large evergreen tree per ten lineal feet. 428 feet = 42.8	41 trees	Complies

The applicant has provided the necessary landscaping; however we recommend that the twenty-six (26) spaces on the south side of the property should be broken up by a landscape peninsula. In addition, the applicant has not indicated the landscape species and size. The applicant shall indicate exact species and size to confirm that ordinance minimums have been met.

Trash Enclosure Screening:

The site plan indicates a trash enclosure along the southern property line. Screening details were not provided.

Patio

There are four proposed patio spaces underneath overhangs that are directly accessible from adjacent activity and dining rooms and a large uncovered patio space to the southeast corner of the building. These patio spaces will provide useable outdoor space for residents

Items to be Addressed: 1). Install one (1) landscape peninsula within the 26 spaces on the south side of the property; 2). Indicate exact landscape species and size; and 3). Provide trash enclosure screening details.

PHOTOMETRICS

The applicant has provided a lighting (photometric) plan. Proposed site lighting includes thirteen (13) twenty-five foot high pole mounted lights. The fixture is a full-cut off shoe box type that meets the nighttime friendly requirement. The fixture and photometrics meet ordinance requirements.

The applicant has not shown any building lighting. However, some building lighting is required by code. The applicant shall confirm all building lighting is a full cut-off or a fully shielded fixture.

Items to be Addressed: Confirm if building lighting is full cut-off or fully shielded.

STORMWATER DETENTION

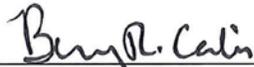
The applicant has shown underground detention. Stormwater will be reviewed by the Engineering Department.

Items to be Addressed: None.

RECOMMENDATION

Overall we support the project and find that this site is a suitable location for the proposed use. However, we find that the following items should be addressed prior to preliminary site plan approval:

1. Consider alternative site arrangements.
2. Relocate/reconfigure parking to meet setback requirements.
3. Address the recommendations of the Traffic Consultant's review.
4. Provide pedestrian connection from Square Lake to the main entrance.
5. Planning Commission to determine if 64 parking spaces are sufficient.
6. Provide bicycle parking rack.
7. Install one (1) landscape peninsula within the twenty-six (26) spaces on the south side of the property.
8. Indicate exact landscape species and size.
9. Provide trash enclosure screening details.
10. Confirm if building lighting is full cut-off or fully shielded.



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

#225-

Cc:

Oakland Troy Senior Project

Troy, Michigan

SITE PLAN APPROVAL 09/13/13



Applicant: Windemere of Troy Land Holdings LLC

edmund london & associates, inc.
architects & planners



20750 civic center drive, suite 610, southfield, michigan 48076 tel: 248-353-4820 fax: 248-353-2920

CIVIL

- C-1 BOUNDARY, TOPOGRAPHIC & TREE SURVEY
- C-2 ENGINEERING SITE PLAN / TREE PRESERVATION PLAN

LANDSCAPE

- LS-1 CONCEPTUAL LANDSCAPE PLAN

ARCHITECTURAL

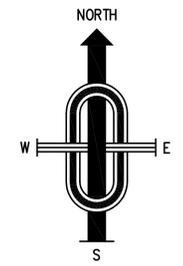
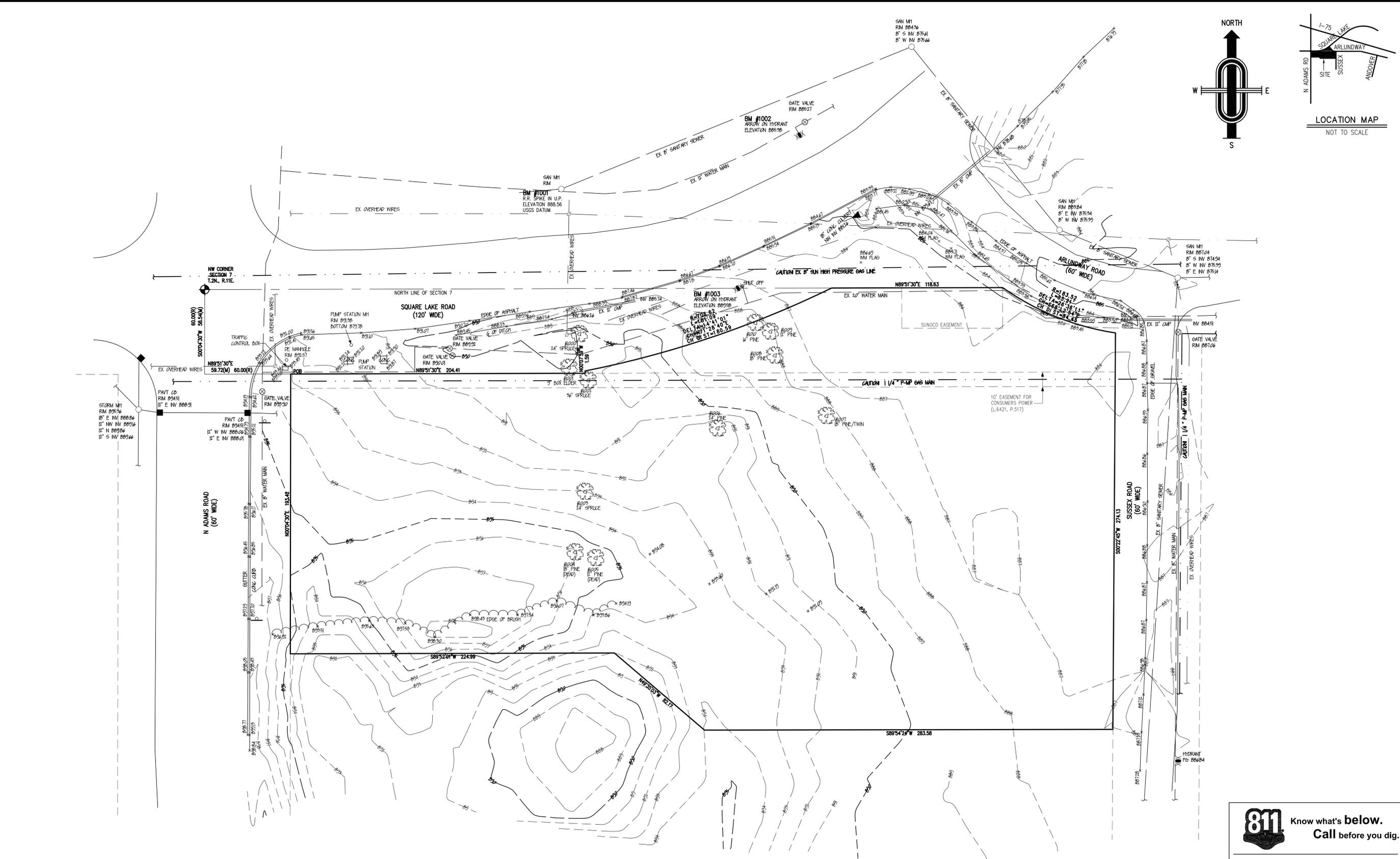
- A-1.0 COMPOSITE SITE PLAN
- A-2.0 COMPOSITE FIRST & SECOND FLOOR PLANS
- A-3.0 COMPOSITE EXTERIOR ELEVATIONS

PHOTOMETRICS

- 1 TYPICAL LIGHTING VALUES AT GRADE
- 2 TYPICAL LIGHTING VALUES AT GRADE

Civil Engineer: JJ Associates, Inc.

Landscape Architect: FPA / Felino A. Pascual and Associates, Inc.



VIDEO	PERMIT #	APPROVAL DATE	EXP. DATE	AGENCY APPROVALS
ACT 451 PA 1994	C2-50-0024F	12/17/2002	12/17/2007	
P. 253 - 313				
DET. P. 2003(M)	85118	4/30/2003	4/30/2004	
P.C. M.C.				
FIRE MARSHAL				
SANITARY				
WATERMAIN				
M.C.P.W.C.				
DETROIT Edison				
OTHERS				

TAG NUMBER	NAME	DIAMETER (INCHES)
1000	SPRUCE	24
1001	BOX ELDER	9
1002	SPRUCE	36
1003	SPRUCE	24
1004	PINE (DEAD)	18
1005	PINE (DEAD)	12
1006	PINE	24
1007	PINE/TWIN	18
1008	PINE	18
1009	PINE	12
1010	PINE	16
1011	PINE	18

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

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL EXISTING UTILITIES (WHETHER SHOWN OR NOT SHOWN ON THIS DRAWING) BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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JJ ASSOCIATES, INC.
Civil Engineering and Surveying
1050 South Boulevard E. - Suite 200, Rochester Hills, MI 48307
Telephone: (586) 726-9111 Fax: (248) 862-7707
Website: www.jjassociates.net

DATE	DESCRIPTION
08/09/2013 <td>SITE PLAN APPROVAL</td>	SITE PLAN APPROVAL
09/13/2013 <td>REV. DATE</td>	REV. DATE

DATE: 08/09/2013
DRAWN BY: J.L.S.
CHECKED BY: J.J.J.

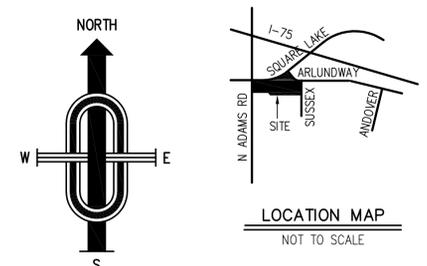
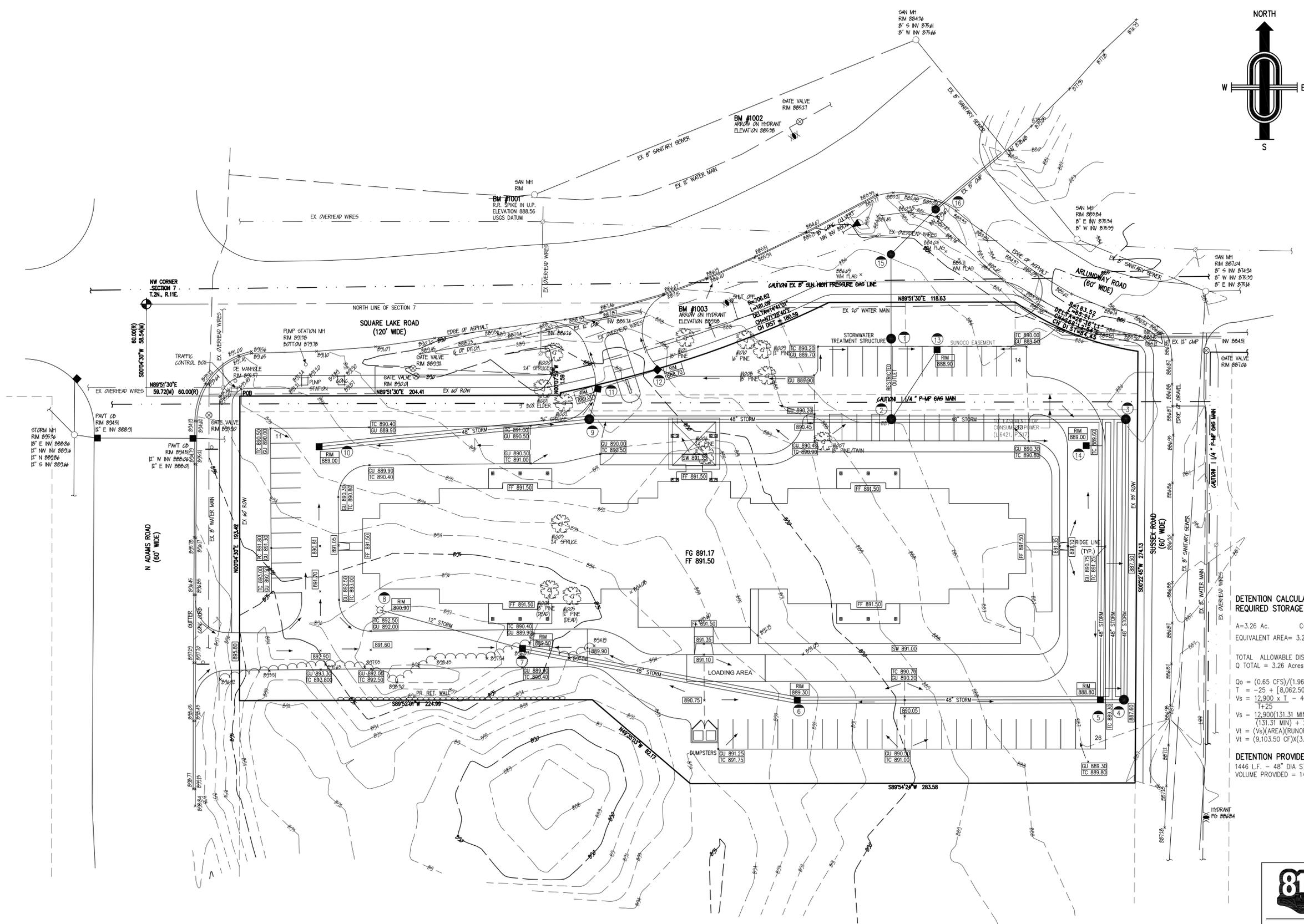
"OAKLAND TROY SENIOR CENTER"
PART OF THE NW 1/4 OF SECTION 7
T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN.
BOUNDARY, TOPOGRAPHIC AND TREE SURVEY

SCALE: 1" = 30' HOR 1" = 50' VER 1" = 5'

CITY #

DRAWING: PS-13-901

C-1



**DETENTION CALCULATIONS - 25 YEAR STORM
REQUIRED STORAGE PER O.C.D.C. STANDARDS:**

A=3.26 Ac. C=0.60
EQUIVALENT AREA= 3.26Acx0.6 = 1.96 Ac.

TOTAL ALLOWABLE DISCHARGE FROM DEVELOPMENT:
Q TOTAL = 3.26 Acres X 0.2 CFS/ACRE = 0.65 CFS

$Q_0 = (0.65 \text{ CFS}) / (1.96 \text{ Ac.}) = 0.33$
 $T = -25 + [8,062.50 / (0.33)^{0.5}]^{0.5} = 131.31 \text{ MIN}$
 $V_s = 12,900 \times T - 40 \times Q \times T$
 $T = 25$
 $V_s = 12,900(131.31 \text{ MIN}) - 40(0.33)(131.31 \text{ MIN}) = 9,103.50 \text{ CF}$
 $V_t = (V_s \times \text{AREA}) / (\text{RUNOFF COEF})$
 $V_t = (9,103.50 \text{ CF}) / (3.26 \text{ Ac})(0.60) = 17,806.45 \text{ CF}$

DETENTION PROVIDED:
 1446 L.F. - 48" DIA STORM SEWER
 VOLUME PROVIDED = 1436' x 3.14 x 2' x 2' = 18,036 C.F.

"OAKLAND TROY SENIOR CENTER"
 PART OF THE NW 1/4 OF SECTION 7
 T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN.
**ENGINEERING SITE PLAN
 TREE PRESERVATION PLAN**

DATE	08/09/2013	DESCRIPTION	UPDATE LAYOUT (AS) SITE PLAN APPROVAL
REV. DATE	08/02/2013 09/13/2013		
DRAWN BY	J.L.S.	CHECKED BY	J.J.J.

JJ ASSOCIATES, INC.
 Civil Engineering and Surveying
 1050 South Boulevard E. - Suite 200, Rochester Hills, MI 48307
 Telephone: (586) 726-9111 Fax: (248) 852-7707
 Website: www.jjassociates.net

TAG NUMBER	NAME	DIAMETER (IN.)	SAVE/REMOVE
1000	SPRUCE	24	REMOVE
1001	BOX ELDER	9	SAVE
1002	SPRUCE	36	SAVE
1003	SPRUCE	24	REMOVE
1004	PINE (DEAD)	18	REMOVE
1005	PINE (DEAD)	12	REMOVE
1006	PINE	24	REMOVE
1007	PINE/TWIN	18	REMOVE
1008	PINE	18	REMOVE
1009	PINE	12	SAVE
1010	PINE	16	SAVE
1011	PINE	18	SAVE

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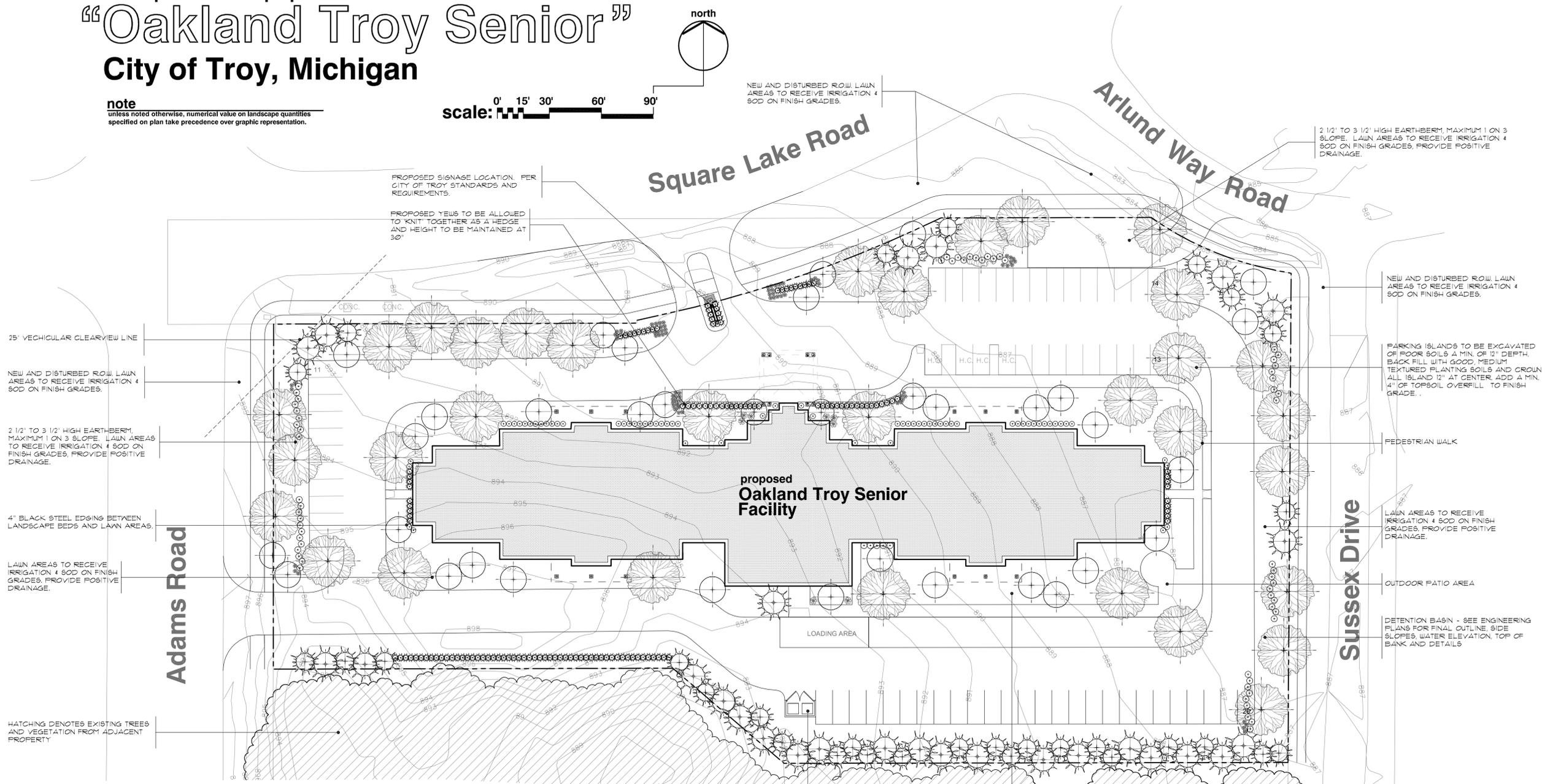
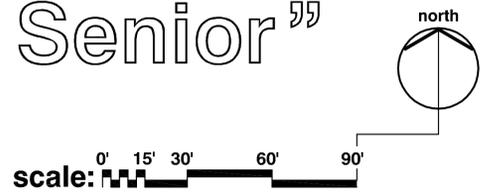
SCALE
 1" = 30' HOR 1"=50'
 VER 1"=5'

CITY #
 DRAWING
 PS-13-901
C-2

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conceptual landscape plan for:
“Oakland Troy Senior”
 City of Troy, Michigan

note
 unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



landscape key

- deciduous canopy trees
(MAPLES, LOCUST, GINKGO, SWEET GUM, OAKS, ETC.)
- small flowering ornamental trees
(SERVICEBERRIES, REDBUDS, DOGWOODS, CHERRIES, PEARS, ETC.)
- large and small evergreen trees
(SPRUCES, PINES, FIRS, ETC.)
- flowering deciduous shrubs
(ROSES, LILAC, PRIVETS, VIBURNUMS, HYDRANGEA, ETC.)
- evergreen shrubs
(YEW, JUNIPERS, HOLLIES, ARBORVITAE)
- perennials and grasses
- seasonal flowers

landscape requirements:

greenbelt requirements	REQUIRED	PROVIDED
NO. OF GREENBELT TREES (SQUARE LAKE ROAD) (504' SQUARE LAKE ROAD FRONTAGE / 1-TREE PER 30' = 16.8 TREES)	17	17
NO. OF GREENBELT TREES (ADAMS ROAD) (143' ADAMS ROAD FRONTAGE / 1-TREE PER 30' = 4.8 TREES)	6	6
NO. OF GREENBELT TREES (ARLUND WAY) (85' SUSSEX DR = 85' FRONTAGE / 1-TREE PER 30' = 2.83 TREES)	3	3
NO. OF GREENBELT TREES (SUSSEX DRIVE) (274' SUSSEX DR = 274' FRONTAGE / 1-TREE PER 30' = 9.13 TREES)	9	10
parking lot landscape	REQUIRED	PROVIDED
NO. OF PARKING SPACES	79	
NO. OF PARKING LOT TREES 1-TREE PER 8-SPACES (79-SPACES/8-SPACES X 1-TREES = 10 TREES)	10	11

site landscape area	REQUIRED	PROVIDED
TOTAL AREAS OF RETAIL SITE		148,890 S.F.
AREAS OF SITE LANDSCAPE AREAS REQUIRED (20% OF SITE = 148,890 S.F. X .20 = 29,780 S.F.)	29,780 S.F.	
AREAS OF SITE LANDSCAPE AREAS PROVIDED (SITE AREA 148,890 S.F. - 87,674 S.F. NON LANDSCAPE AREAS = 61,214 S.F.)	61,214 S.F. (41%)	
TOTAL NON-LANDSCAPED AREA		87,674 S.F.
BUILDING AREA		52,221 S.F.
WALKS, PARKING & DRIVES AREA		35,453 S.F.
buffer requirements	REQUIRED	PROVIDED
TOTAL LINEAL FT. BUFFER (SOUTH PROPERTY LINE)	541'	
165' @ 1-NARROW EVERGREEN TREE PER 3' = 54.99 EVERGREEN TREES	54	54
428' @ 1-EVERGREEN TREE PER 10' = 42.8 EVERGREEN TREES	43	41



CAUTION!
 THE LOCATION 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 OF ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND ELEVATION PRIOR TO THE START OF CONSTRUCTION.



FPA
 FELINO A. PASCUAL
 and ASSOCIATES, Inc.
 Community Land Planner and
 registered Landscape Architect
 16000 W. 9-Mile Road, Suite 520
 Southfield, Michigan 48075
 ph. (248) 557-5588
 fax. (248) 557-5416



client:
WINDEMERE OF TROY LAND HOLDING, LLC
 6850 19-Mile Road
 Sterling Heights, Michigan 48314
 ph. (586) 685-1000
 ph. (586) 685-1001

project:
OAKLAND TROY SENIOR

project location:
 Square Lake Road,
 Adams Road and
 Sussex Drive
 City of Troy,
 Michigan

sheet title:
Conceptual Landscape Plan

rev job no./issue/revision date:
LS13.067.07 review 8-7-2013
LS13.067.07 city 8-8-2013
LS13.067.09 city 9-13-2013

drawn by:
JP, CZ
 checked by:
FP
 date:
7-30-2013

notice:
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Do Not scale drawings. Use figured dimensions only
 project no:
LS13.067.08

sheet no:
LS-1 of 1

SITE AND BUILDING DATA	
ZONING	LOT COVERAGE
SITE IS ZONED: R-1A ONE FAMILY RESIDENTIAL	SITE CONTAINS 3.26 ACRES = 141,987 SQ. FT. TOTAL PROPOSED BUILDING AREA = 30,725 SQ. FT. LOT COVERAGE = 22%
NORTH: R-1A ONE FAMILY RESIDENTIAL	SETBACK AND BUILDING HEIGHT REQUIREMENTS
SOUTH: R-1A ONE FAMILY RESIDENTIAL	
EAST: R-1A ONE FAMILY RESIDENTIAL	
WEST: Q-1 OFFICE BUILDING DISTRICT (BLOOMFIELD TOWNSHIP)	FRONT: 30'-0" SIDE YARD: 30'-0" REAR YARD: 30'-0" MAXIMUM HEIGHT OF STRUCTURES: 30'-0" TO THE MIDPOINT OF THE MANSARD ROOF

CONTACT PERSON (ARCHITECT):	ROBERT ZABOWSKI, RA EDMUND LONDON & ASSOCIATES 20750 CIVIC CENTER DR., STE. 610 SOUTHFIELD, MI 48076	PH: (248) 353-4820 FAX: (248) 353-2920
-----------------------------	---------------------------------------------------------------------------------------------------------------	-------------------------------------------

APPLICANT: WINDMERE OF TROY LAND HOLDINGS LLC 6850 NINETEEN MILE ROAD STERLING HEIGHTS, MI 48314	PH: (586) 685-1000 FAX: (586) 685-1001	OWNER: MANCINI ENTERPRISES, LLC 6850 NINETEEN MILE ROAD STERLING HEIGHTS, MI 48314	PH: (586) 685-1000 FAX: (586) 685-1001
-----------------------------------------------------------------------------------------------------------	-------------------------------------------	---------------------------------------------------------------------------------------------	-------------------------------------------

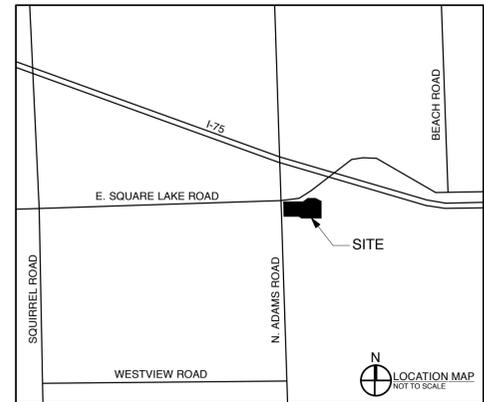
PARKING CALCULATION			
USE	REQUIREMENT	BEDS / SQUARE FEET	PARKING SPACES REQUIRED
ASSISTED LIVING	1 SPACE EVERY 0.62 UNITS + 1 SPACE EACH EMPLOYEE ON LARGEST TYPICAL SHIFT	92 BEDS	(92 X 0.62) + 30 = 87.04 = 88 SPACES
		TOTAL PARKING SPACES REQUIRED = 88 SPACES	
		TOTAL PARKING SPACES PROVIDED = 64 SPACES	
		ACCESSIBLE PARKING SPACES REQUIRED = 4 SPACES (1 VAN ACCESSIBLE)	
		ACCESSIBLE PARKING SPACES PROVIDED = 4 SPACES (1 VAN ACCESSIBLE)	

LEGAL DESCRIPTION

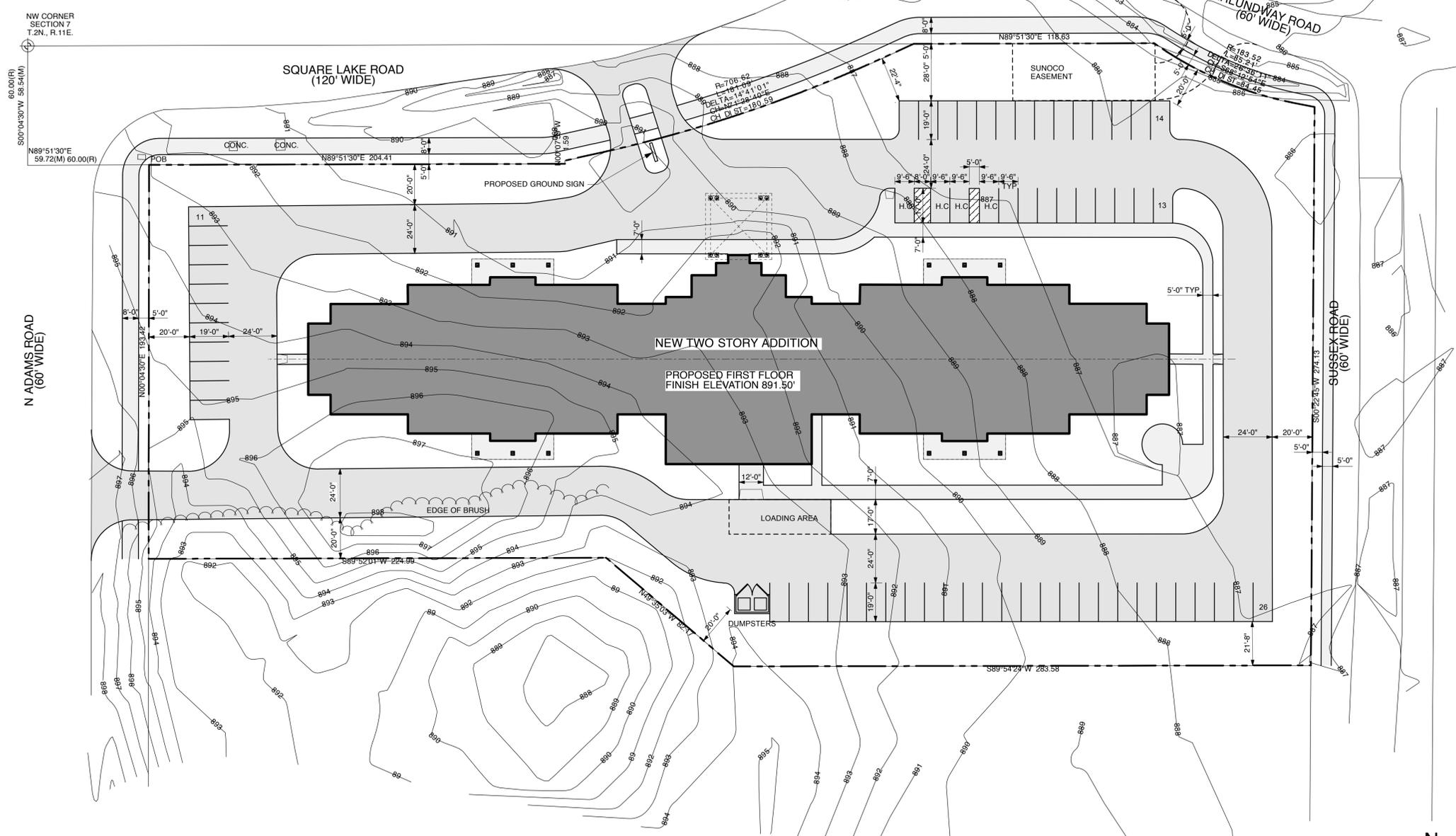
LAND IN THE CITY OF TROY, COUNTY OF OAKLAND, STATE OF MICHIGAN, DESCRIBED AS:
 LOT 1, MIDDLESEX COUNTRY HOME SITES, A SUBDIVISION OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 7, T.2N., R.11E TROY TWP (NOW CITY OF TROY) OAKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 44, PAGE 12 OF PLATS, OAKLAND COUNTY RECORDS, AND PART OF VACATED ARLUNDWAY ROAD (60' WIDE), MORE PARTICULARLY DESCRIBED AS: BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 7 THENCE S00°04'30"W 58.54 FEET (RECORDED AS 60.00 FEET) ALONG SAID SECTION LINE (ALSO BEING THE CENTERLINE OF ADAMS ROAD); THENCE N89°51'30"E 59.72 FEET (RECORDED AS 60.00 FEET) TO THE POINT OF BEGINNING; THENCE N89°51'30"E 204.41 ALONG THE NORTH LINE OF LOT 1; THENCE N00°07'59"W 1.59 FEET; THENCE 181.09 FEET ALONG THE ARC OF A CURVE TO THE LEFT (RADIUS 706.62', CHORD BEARS N71°28'40"E 108.59 FEET; TO A POINT ON THE NORTH LINE OF SECTION 7; THENCE CONTINUING ALONG SAID LINE N89°51'30"E 118.63 FEET; THENCE 85.21 FEET ALONG THE ARC OF A CURVE TO THE LEFT (RADIUS 183.52 FEET, CHORD BEARS S68°12'29"E 84.45 FEET); ALONG THE WEST RIGHT-OF-WAY LINE OF ARLUNDWAY ROAD (60' WIDE); TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF SUSSEX ROAD (60' WIDE) THENCE ALONG SAID RIGHT-OF-WAY LINE S00°22'45"W 274.13 FEET; THENCE S89°54'24"W 283.58 FEET; THENCE N49°35'03"W 82.17 FEET; THENCE S89°52'01"W 224.99 FEET TO THE EAST RIGHT-OF-WAY LINE OF ADAMS ROAD (120' WIDE); THENCE ALONG SAID RIGHT-OF-WAY LINE N00°04'30"E 193.42 FEET TO THE POINT OF BEGINNING. CONTAINING 141,987 SQUARE FEET OR 3.26 ACRES OF LAND.

GENERAL SITE NOTES

- REFER TO CIVIL DRAWINGS FOR ALL PARKING LOT AND SIDEWALK DIMENSIONS
- REFER TO ELECTRICAL DRAWINGS FOR ALL SITE LIGHT LOCATIONS

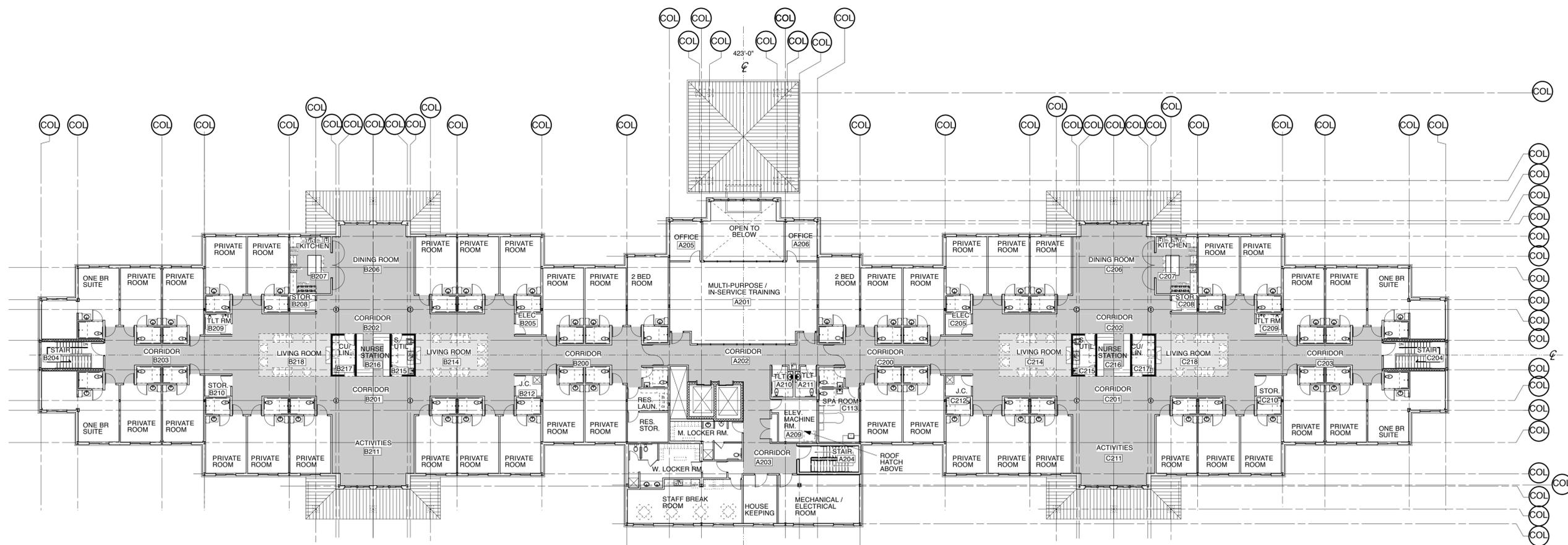


NOTE: REFER TO CIVIL DRAWINGS FOR NEW GRADES

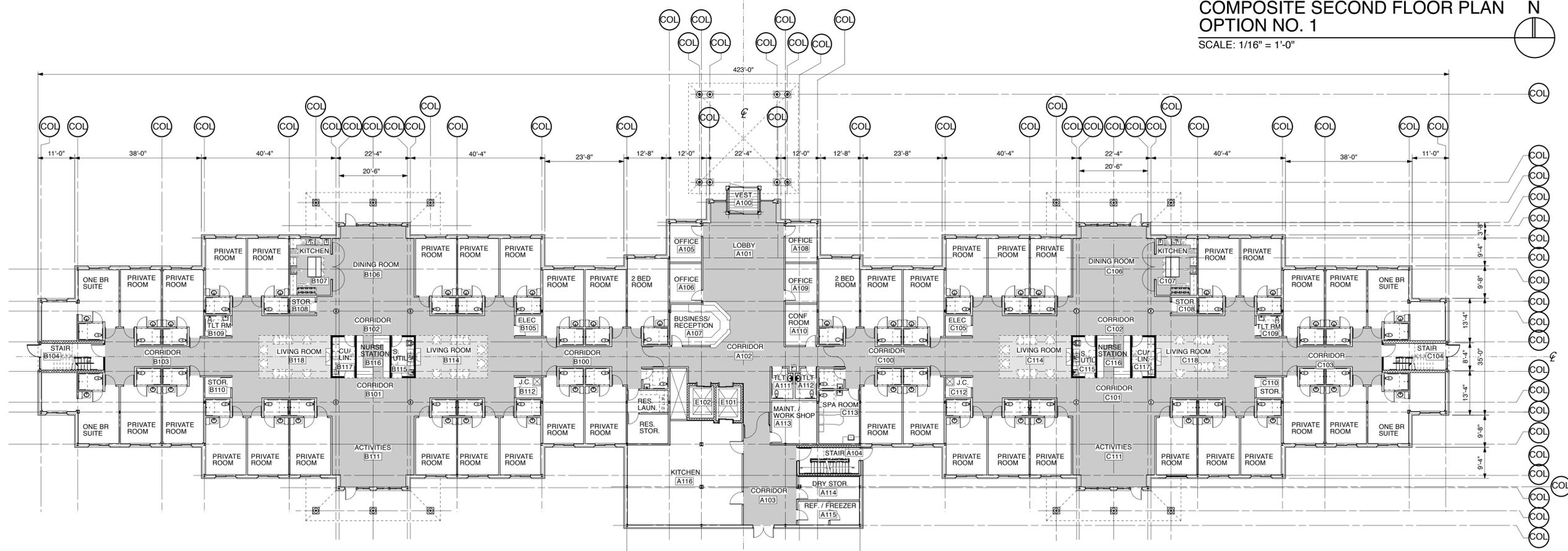


SITE PLAN
 SCALE: 1" = 30'-0"





**COMPOSITE SECOND FLOOR PLAN
OPTION NO. 1**
SCALE: 1/16" = 1'-0"



**COMPOSITE FIRST FLOOR PLAN
OPTION NO. 1**
SCALE: 1/16" = 1'-0"



1 NORTH ELEVATION
 A-2.0 SCALE: 1/16" = 1'-0"



2 SOUTH ELEVATION
 A-2.0 SCALE: 1/16" = 1'-0"



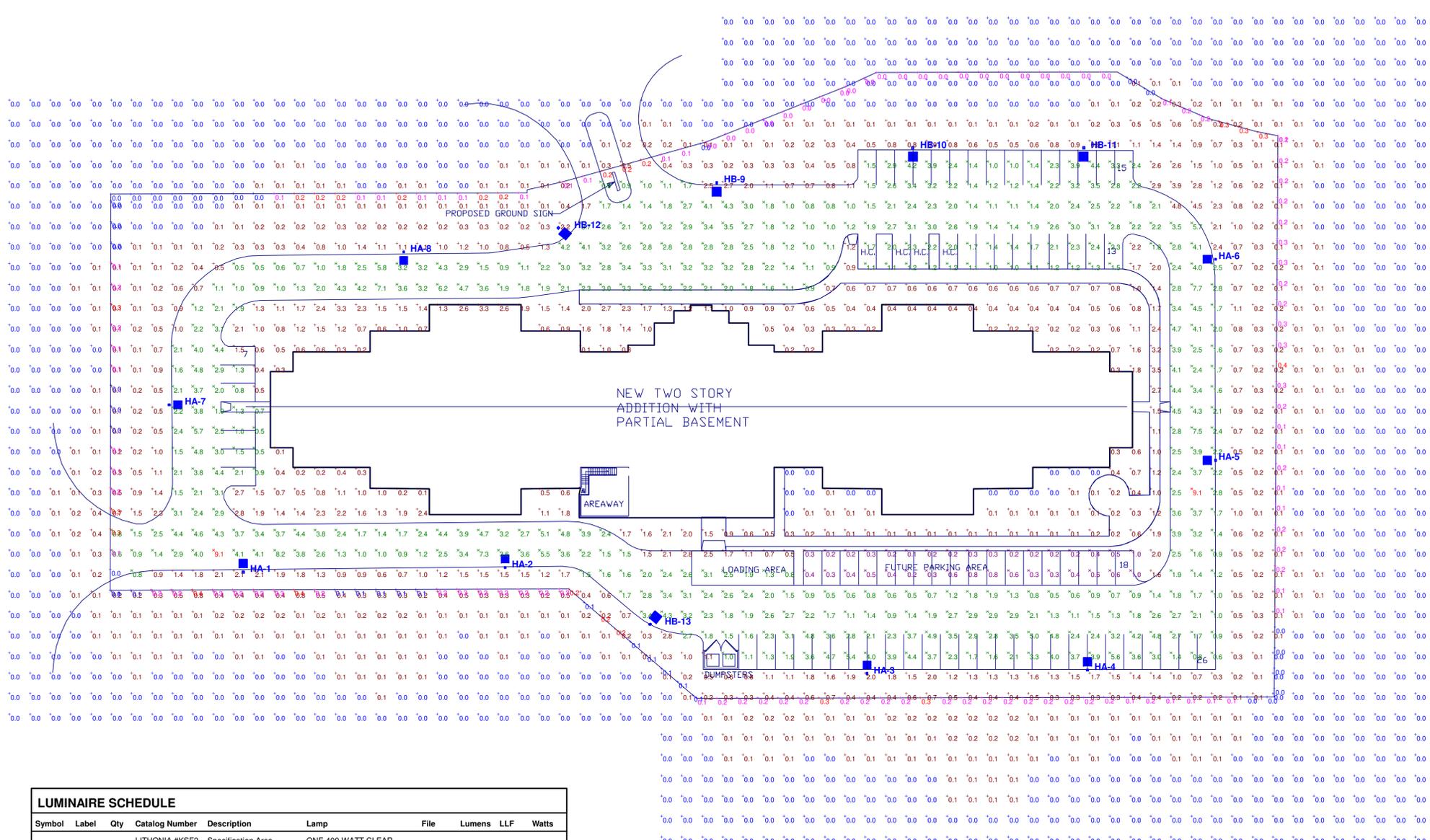
3 WEST ELEVATION
 A-2.0 SCALE: 1/16" = 1'-0"



4 EAST ELEVATION
 A-2.0 SCALE: 1/16" = 1'-0"



OAKLAND TROY SENIOR PROJECT
 TYPICAL LTG VALUES AT GRADE
 GASSER BUSH ASSOCIATES



Plan View
Scale 1" = 30'

LUMINAIRE LOCATIONS						
No.	Label	Location		MH	Orientation	Tilt
		X	Y			
1	HA	-793.7	184.4	25.0	0.0	0.0
2	HA	-665.1	186.6	25.0	0.0	0.0
3	HA	-487.6	134.8	25.0	0.0	0.0
4	HA	-379.4	136.4	25.0	0.0	0.0
5	HA	-316.5	239.0	25.0	-90.0	0.0
6	HA	-316.5	337.1	25.0	-90.0	0.0
7	HA	-829.9	266.1	25.0	90.0	0.0
8	HA	-714.8	340.8	25.0	180.0	0.0
9	HB	-561.2	374.6	25.0	180.0	0.0
10	HB	-465.1	391.6	25.0	180.0	0.0
11	HB	-381.2	391.6	25.0	180.0	0.0
12	HB	-639.0	352.4	25.0	130.0	0.0
13	HB	-594.1	158.8	25.0	39.2	0.0

LUMINAIRE SCHEDULE									
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
■	HA	8	LITHONIA #KSF2 400M R3 HS	Specification Area Luminaire, 400W Metal Halide, R3 Reflector with house-side shield, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA	ONE 400 WATT CLEAR ED28 PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R_3_HS.ies	38000	0.72	456
■	HB	5	LITHONIA #KSF2 400M R4SC	Specification Area Luminaire, 400W Metal Halide, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA	ONE 400 WATT CLEAR ED28 PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R_4SC.ies	38000	0.72	456

- NOTES**
- SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
 - SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
 - CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP. GBA DOES NOT ACT AS THE CIVIL OR STRUCTURAL ENGINEER AND DOES NOT DETERMINE BASE REQUIREMENTS. POLES SPECIFICATIONS ARE NOT INCLUDED WITH EXTERIOR LIGHTING PHOTOMETRIC ANALYSIS. THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
FUTURE PARKING AREA	X	0.4 fc	1.0 fc	0.1 fc	10.0:1	4.0:1
OVERALL LTG VALUES AT GRADE	+	0.7 fc	9.1 fc	0.0 fc	N/A	N/A
PARKING LOT	X	2.5 fc	9.1 fc	0.5 fc	18.2:1	5.0:1
PROPERTY LINE AT 5' ON A VERTICAL PLANE	+	0.1 fc	0.4 fc	0.0 fc	N/A	N/A

Designer
 LK/KJS
Date
 Aug 15 2013
Scale
 AS SHOWN
Drawing No.
 #13-17286-V1



OAKLAND TROY SENIOR PROJECT
TYPICAL LTG VALUES AT GRADE
GASSER BUSH ASSOCIATES

Designer

LK/KJS

Date

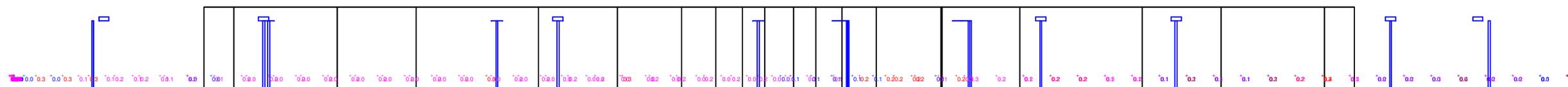
Aug 15 2013

Scale

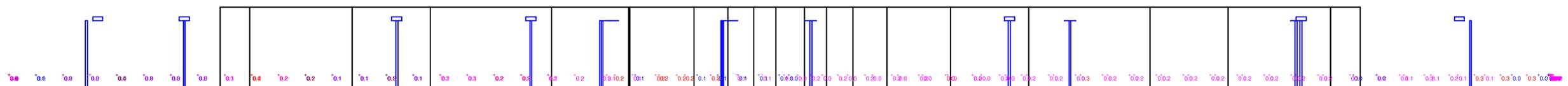
AS SHOWN

Drawing No.

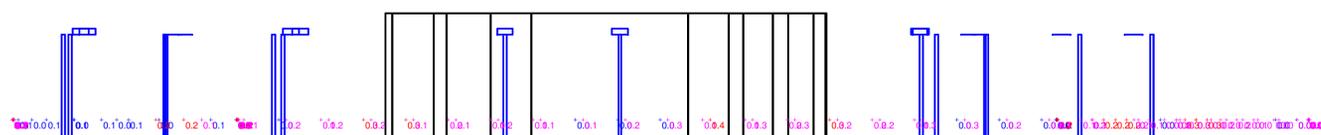
#13-17286-V1



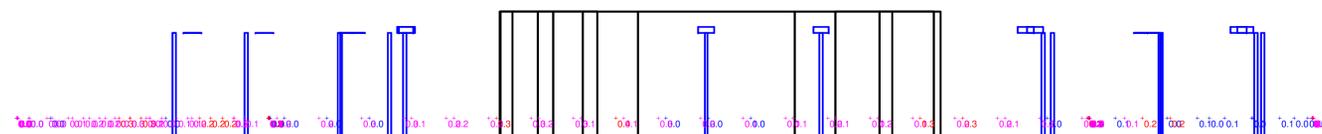
North Elevation
Scale 1" = 20'



South Elevation
Scale 1" = 20'



East Elevation
Scale 1" = 20'



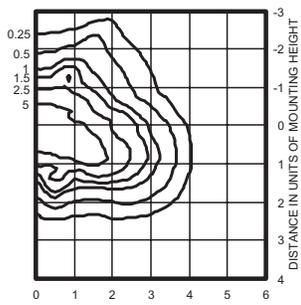
West Elevation
Scale 1" = 20'

KSF2 Arm-Mounted Rectilinear Cutoff Lighting

Coefficient of Utilization Initial Footcandle

KSF2 400M R2 TEST NO: 1193031801P

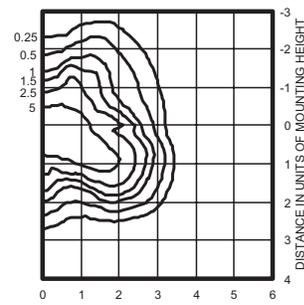
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 38000 lumens. Footcandle values based on 20' mounting height.
Classification: Type II, Short, Full Cutoff

KSF2 400M R3 TEST NO: 119410051P

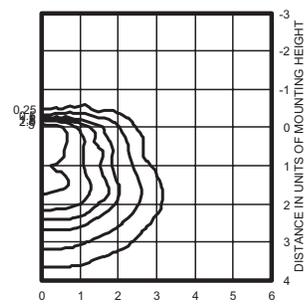
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 38000 lumens. Footcandle values based on 20' mounting height.
Classification: Type III, Short, Full Cutoff

KSF2 400M R4SC TEST NO: 1193041301P

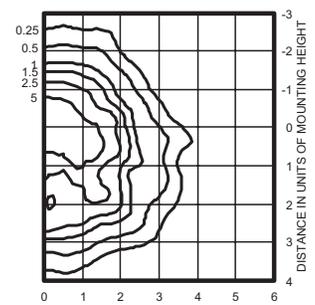
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 38000 lumens. Footcandle values based on 20' mounting height.
Classification: Unclassified (Type IV, Very Short), Full Cutoff

KSF2 400M R4W TEST NO: LTL8509P

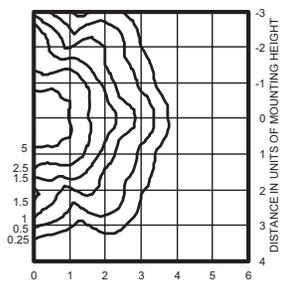
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 38000 lumens. Footcandle values based on 20' mounting height.
Classification: Type IV, Short, Full Cutoff

KSF2 400M R5S TEST NO: 1193051801P

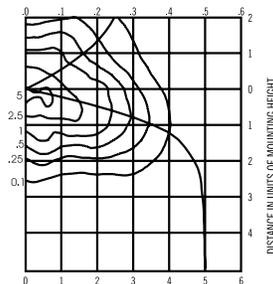
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 38000 lumens. Footcandle values based on 20' mounting height.
Classification: Unclassified (Type IV, Very Short), Full Cutoff

KSF2 400S R2 Test No. 1193031601

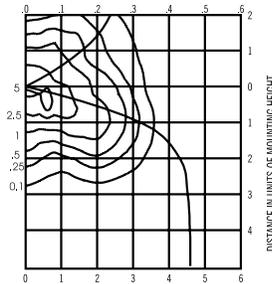
COEFFICIENT OF UTILIZATION



400W High Pressure Sodium lamp, 50000 rated lumens. Footcandle values based on 35' mounting height. Distribution II, cutoff.

KSF2 400S R3 Test No. TEST NO. 1194091501

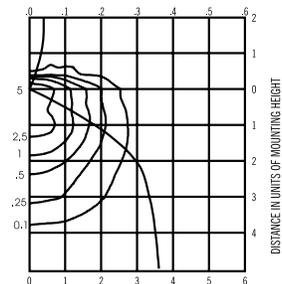
COEFFICIENT OF UTILIZATION



400W High Pressure Sodium lamp, rated lumens. Footcandle values based on 35' mounting height. Distribution III, cutoff.

KSF2 400S R4SC Test No. 1193042201

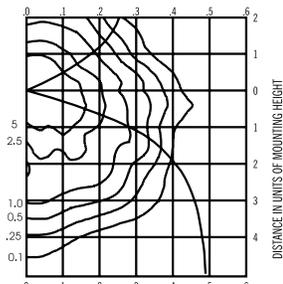
COEFFICIENT OF UTILIZATION



400W High Pressure Sodium lamp, 50000 rated lumens. Footcandle values based on 35' mounting height. Distribution IV, sharp cutoff.

KSF2 400S R4W Test No. LTL8506

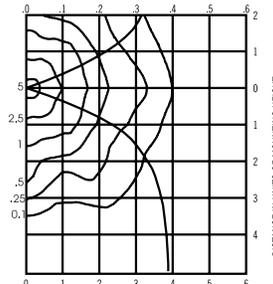
COEFFICIENT OF UTILIZATION



400W High Pressure Sodium lamp, 50000 rated lumens. Footcandle values based on 20' mounting height. Distribution IV wide, froward throw.

KSF2 400S R5S Test No. 1193051704

COEFFICIENT OF UTILIZATION



400W High Pressure Sodium lamp, 50000 rated lumens. Footcandle values based on 35' mounting height. Distribution V, cutoff.

NOTES:

- Photometric data for other distributions can be accessed from the Lithonia Lighting website. (www.Lithonia.com)
- For electrical characteristics, consult outdoor technical data specification sheets on www.Lithonia.com.
- Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change.

Mounting Height Correction Factor

(Multiply the fc level by the correction factor)

35' mounting height	20' mounting height
15 ft. = 5.4	15 ft. = 1.78
30 ft. = 1.36	30 ft. = 0.45
40 ft. = 0.77	40 ft. = 0.25

$$\left(\frac{\text{Existing Mounting Height}}{\text{New Mounting Height}} \right)^2 = \text{Correction Factor}$$