

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
September 9, 2013
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC:

OPEN PUBLIC HEARING #1... Review of site plan, special use, and environmental impact assessment for proposed 16,120 square-foot gymnasium and classroom addition for Brighton Nazarene Church, located at 7669 Brighton Road in Section 25, petitioned by Brighton Nazarene Church.

Planning Commission disposition of petition

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan (07-30-13).

OPEN PUBLIC HEARING #2... Review of request to table to the October 15, 2013 Planning Commission Meeting for a site plan, special use, and environmental impact assessment to construct a new 2,700 square foot Qdoba drive through restaurant located at the Meijer outlot at 3883 E. Grand River, Howell, petitioned by Kevin Egnatuk of Southwind Restaurants, LLC.

Planning Commission disposition of petition

- A. Disposition of Request to Table.

Administrative Business:

- *Staff report*
- *Approval of August 26, 2013 Planning Commission special meeting minutes*
- *Member discussion*
- *Adjournment*

**GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW**

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS*: Brighton Nazarene Church

OWNER'S NAME & ADDRESS: Same as applicant

SITE ADDRESS: 7669 Brighton Road PARCEL #(s): 4711-25-400-058
Brighton, Mi 48116

APPLICANT PHONE: (810) 227-6600 OWNER PHONE: ()

LOCATION AND BRIEF DESCRIPTION OF SITE: North side of Brighton Road west of Worden Lake Woods. The site is currently occupied by Brighton Nazarene Church.

BRIEF STATEMENT OF PROPOSED USE: New gymnasium and Sunday School Classrooms. The existing Church use shall remain.

THE FOLLOWING BUILDINGS ARE PROPOSED: Expansion of the existing Church to include a new gymnasium and additional Sunday School classrooms.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Gary Anson

ADDRESS: 7669 Brighton Rd., Brighton, Mi 48116

* If applicant is not the owner, a letter of Authorization from Property Owner is needed.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:
1.) Brent LaVanway of Bozz Engineering at (517) 548-1670
Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: Gary Anson DATE: 5/29/13
PRINT NAME: Gary Anson PHONE: _____
ADDRESS: 7669 Brighton Road Brighton, Mi 48116

**APPLICATION FOR SPECIAL LAND USE
GENOA TOWNSHIP**

APPLICANT NAME* & ADDRESS: Brighton Nazarene Church

OWNER NAME* & ADDRESS: Same as applicant

SITE ADDRESS: 7669 Brighton Road PARCEL #(s): 4711-25-400-058
Brighton, MI 48116

APPLICANT PHONE: (810) 227-6600 OWNER PHONE: ()

Location and brief description of site and surroundings:

Subject site is existing Church Facility. Worden Lake Woods single family residential development is to the east.

Proposed Use:

Facility expansion for new gymnasium and additional Sunday School classrooms

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

The project is for a gym and Sunday School Classroom addition to the existing Brighton Nazarene Church.

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

The facility expansion allows the Church to serve the existing congregation and future growth of the Church.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

The site is currently, and will be served by public water and a septic system. The primary use of the facility places little burden on roads, police and fire protection.

- d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

Minimal traffic impact. No hazardous substances.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)?
If so, describe how the criteria are met.

Yes, all criteria are met except existing parking
is within approximately 8 feet of the east property
line.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED Gary Anscombe STATES THAT THEY ARE THE FREE OWNER* OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

x BY Gary Anscombe

ADDRESS: 7669 Brighton Road Brighton, MI 48116

*Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Brent LaVanway of Boss Engineering at (517) 548-1670
Name Business Affiliation Fax No.

Note: This application must be accompanied by a site plan review application and the associated site plan review submittal requirements. (The Zoning Administrator may allow a less detailed sketch plan for a change in use.)

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: Gary Anscombe DATE: 5/29/13

PRINT NAME: GARY ANSCOMBE PHONE: _____

ADDRESS: 7669 Brighton Road Brighton, MI 48116



BOSS ENGINEERING

3121 E. Grand River
Howell, MI 48843

engineers
surveyors
planners
landscape
architects

July 31, 2013

Ms. Kelly VanMarter, Assistant Township Manager
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Re: Brighton Nazarene Church

Dear Kelly,


Attached is the following supporting documentation provided by the Church regarding the outstanding items discussed at the last Planning Commission meeting:

1. Church response to conditions from previous Special Land Use approval.
2. Church response to concerns raised by residents at the public hearing.
3. Four page registration form currently being utilized by Skate Park staff that is required of all new participants.
4. Letter from AK Services informing the Church and Township that they will begin to find an alternative location for testing of buses and motorcycles.
5. Letter from AK Services informing the Church and Township that they would like to continue automobile testing at the Church and will file a Special Land Use request if required by the Township.
6. Picture of existing sign informing visitors that no skate boarding is allowed in the parking lot.
7. Picture of existing security camera.

If you have any questions, please feel free to contact me.

Very truly yours,

BOSS ENGINEERING COMPANY



Brent W. LaVanway, P.E.
Director of Engineering

BWL/bwl

cc: g:\13-100\docs\twpletter.doc



July 30, 2013

1. REPLACE 16 TREES ON EAST LINE – This was done however some other trees have died or are dying which we will replace.
2. ADD 3 AUSTRIAN PINES – This was done however only two of the 3 has survived. We will replace the one that didn't survive.
3. MAINTAIN TREE LINE ON EAST – While this has been done for the most part we have still had a few trees die off from snow, and salt from the parking lot. Starting last winter we made changes to how the snow is plowed and as of this past winter our contractor is using a front loader to take snow to back of lot. We have had a conversation with our lawn service and starting with next year's maintenance plan we will include spraying for insects and trimming back vines both of which have a negative impact on the trees.
4. INCLUDE SKATE PARK RULES ON LIABILITY FORM (PROVIDE COPY OF THIS – Please see attached waiver and rules that are given to each new skater when they register at the park.
5. LIGHTS OFF BY 11 00 PM – Our skate park hours of operation are Thursday and Friday 4 – 10, Saturday 9:30am to 10pm. Park is also used for Sunday morning classrooms for High School. Park is closed every year for the month of July. We are also closed for the month of Aug this year.
6. TWO SIGN PROHIBITING OUTDOOR SKATING – Two signs were up however one has been run over and will be replaced before we reopen in September. (see attached photo)
7. NO COMMERCIAL ACTIVITIES SHALL BE ALLOWED IN REGARD TO THE USE OF THE SKATE PARK NOR SHALL SUCH ACTIVITIES BE DELEGATED, ASSIGNED, OR LEASED BY PETITIONER – None have occurred nor will any occur in the future.
8. PETITIONER SHALL PROVIDE SECURITY GUARD TO PATROL THE PARKING LOT AREA ON THE DAYS THE SKATE PARK IS OPEN BETWEEN THE HOURS OF 9PM TO 12 AM – We had the guard for a period of time then switch to security cameras which we thought was ok? We now have a full time staff person running the park that lives on site and that along with the camera system is how we are patrolling the parking lot during skate park hours. Jason also does what he can to monitor the property at night after hours. (see attached photo of cameras 2 of the 6 on the property)




Brighton Nazarene Church
7669 Brighton Rd. Brighton, MI 48116
810.227.6600 www.thenaz.org



Additional new items:

1. Use of lot for drivers training by AK Services: BNC has allowed this company to use our lot for testing for nearly 20 years as a service to the community just like we allow the township to use the building for voting. We felt this was a good way to give back and had no idea we were in violation of any codes. The company is state certified and contracted by the state to test drivers for the state that live in Livingston County. After hearing from our neighbors at the last meeting it was the first we heard of the noise complaints from the buses, trucks and motorcycles. Both AK Services and BNC have discussed this and agree we don't want this to be an issue and will terminate per the attached letter from owner of AK Services. We would like to ask the township and neighbors to consider allowing the testing for driver's license for autos only as the next closest place will be Novi or Howell for local residents. This would only be done during normal business hours.
2. Trash pickup too early: We have contacted the trash pickup company and they have agreed to push the pickup time to after 8AM.
3. Landscape issues on both East and West property lines: Please see proposed landscape plan from Boss Engineering.
4. Parking lot is too long and open: We are adding 4 islands to break this up. Please see proposed parking lot plan from Boss Engineering.

Respectfully submitted by,
Brighton Church of the Nazarene

Robert "Al" Herndon
Building and Grounds Chairman





The Naz Skatepark
2013 Registration Form
(Please Print)



Skaters Full Name: _____
(Last Name) (First Name) (Middle Initial)

Date of Birth: _____ Age: _____ Grade: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Home Phone: _____ Skaters Cell Phone: _____

Skaters E-Mail Address: _____

Does Skater regularly attend church? _____

If yes, where? _____

Skater came as a guest of: _____

Emergency Contact:

Name: _____

Contact Phone #1: _____ #2: _____

Relationship: _____

Physical Limitations (allergies to medicine, asthma etc.): _____

Special
Notes: _____

**AMATEUR ATHLETIC
WAIVER AND RELEASE OF LIABILITY
READ BEFORE SIGNING**

In consideration of being allowed to participate in any way in the Brighton Nazarene Church Skater's Association, related events and activities, hosted by The Naz on site or off site,

I, _____, the undersigned acknowledge, appreciate and agree that:
(participant's full name)

1. The risk of injury from the activities involved in this program is significant, including the potential for permanent paralysis and death, and while particular rules, equipment, and personal discipline may reduce this risk, the risk of serious injury does exist; and
2. **I KNOWINGLY AND FREELY ASSUME ALL SUCH RISKS**, both known and unknown. **EVEN IF ARISING FROM THE NEGLIGENCE OF THE RELEASEES** or others, and assume full responsibility for my participation; and
3. I willingly agree to comply with the stated and customary terms and conditions for participation. If however I observe any unusual significant hazard during my presence of participation, I will remove myself from participation and bring such to the attention of the nearest official immediately; and
4. I, for myself and on behalf of my heirs, assigns, personal representatives and next of kin, **HEREBY RELEASE AND HOLD HARMLESS** the Brighton Church of the Nazarene Skater's Association, their officers, officials, agents and/or employees, other participants, sponsoring agencies, sponsors, advertisers, and if applicable, owners and lessors of premises used to conduct the event ("Releasees"). **WITH RESPECT TO ANY AND ALL INJURY, DISABILITY, DEATH** or loss or damage to person or property, **WETHER ARISING FROM THE NEGLIGENCE OF THE RELEASEES OR OTHERWISE.**

I HAVE READ THIS RELEASE OF LIABILITY AND ASSUMPTION OF RISK AGREEMENT, FULLY UNDERSTAND ITS TERMS, UNDERSTAND THAT I HAVE GIVEN UP SUBSTANTIAL RIGHTS BY SIGNING IT, AND SIGN IT FREELY AND VOLUNTARILY WITHOUT ANY INDUCEMENT.

X _____ Age: _____ Date Signed: _____
(Participant's Signature)

FOR PARTICIPANTS OF MINORITY AGE
(UNDER 18 AT THE TIME OF REGISTRATION)

*THE NAZ IS NOT LIABLE FOR MINORS EXITING THE PREMISE OF OUR PROPERTY.

This is to certify that I, as parent/guardian with legal responsibility for this participant, do consent and agree to his/her release as provided above of all the Releasees, and, for myself, heirs, assigns, and next of kin, I release and agree to indemnify the Releasees from any and all liabilities incident to the minor child's involvement or participation in these programs as provided above, **EVEN IF ARISING FROM THE NEGLIGENCE OF THE RELEASEES**, to the fullest extent permitted by law.

X _____ Date Signed: _____
(Parent/Guardian's Signature)

THE "NO" ZONE

No Tobacco

No Drugs

No Alcohol

No Weapons

No Paraphernalia

If you are found with; Tobacco, Drugs, Alcohol, Weapons or Paraphernalia:

1. We WILL notify the authorities
2. You WILL notify your parents
3. You WILL lose your skating privileges

"NO" EXCEPTIONS!

SKATER rules

NO REGISTRATION / NO PARTICIPATION You must register and have a wristband to skate. Also, all skaters must have a valid waiver on file no matter what!

NO PAY / NO PLAY The session fee is \$7.00 unless you attended a Skate Church or approved service

NO PROTECT / REJECT Helmets are required no matter what! If you do not have your own helmet you can rent one for \$2.00

ROAM / GO HOME Skating is only permitted in the skating area. No skating in the food court, game room, or parking lot or failure to comply results in 12,3 you're out

UPPER ROOM / ZOOM The Upper Room Lounge is for parents only! Do not go up there unless your parent is up there or failure to comply results in 12,3 you're out

SNAKE / TAKE No snaking other skaters, be cool and have fun; let everyone have a run

CUSS / BUS Please don't use cuss words or failure to comply results in 12,3 you're out

MESS / LESS Clean up after yourself so others don't have to! And **NO FOOD OR DRINK IN THE**

SKATING AREA!

WANDER / SQUANDER No wandering or loitering outside,
This includes hanging out in your car!

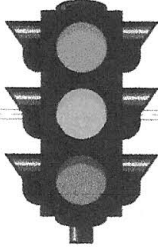
HIGH / BYE If you are under the influence of drugs or alcohol we will notify the authorities, you will notify your parents, and you will lose your skating privileges. Also, no drugs, alcohol, or paraphernalia permitted! You will be asked to leave!

NO ADHERE / CLEAR All skaters are to obey the rules as well
as all staff and volunteers or failure to comply results in
12,3 you're out

COMPLY / FLY 12,3 = Warning one- verbal.

Warning 2 written

And kept on file. Warning 3 removal from park, your return
permitted after meeting and approval from Pastor Tim



AK Services

5412 Daniel Drive • Brighton, MI 48114 • 810.220.8110

July 25, 2013

To Whom It May Concern:

The Brighton Nazarene Church, located at 7669 Brighton Road, was informed on Monday, July 22, 2013, that AK Services, operating out of their parking facility, is not in compliance with Genoa township's zoning guidelines. We understand that we need to look for a new location for testing. The State of Michigan is involved in this relocation process, requiring their approval and authorization for a new testing site. We are requesting to be able to continue to provide testing for Brighton and Livingston County at this present location while we work with the State in setting up a new site.

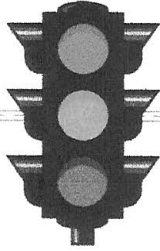
Your assistance in this matter would be greatly appreciated.

Sincerely,

A handwritten signature in black ink that reads "Andrew Kach". The signature is fluid and cursive.

Andrew Kach
Designated Rep. for
AK Services, LLC
810-220-8110

cc: Pastor Ben Walls, Brighton Nazarene Church
State of Michigan Driver Testing Division
File



AK Services

5412 Daniel Drive • Brighton, MI 48114 • 810.220.8110

July 25, 2013

To Whom It May Concern:

The Brighton Nazarene Church, located at 7669 Brighton Road, was informed on Monday, July 22, 2013, that AK Services, operating out of their parking facility, is not in compliance with Genoa township's zoning guidelines. We are interested in applying for a special land use permit that will allow us to continue to provide auto testing only at this facility for the Brighton and Livingston County area.

Your assistance in this matter would be greatly appreciated.

Sincerely,

A handwritten signature in black ink that reads "Andrew Kach". The signature is fluid and cursive, with a large loop at the end.

Andrew Kach
Designated Rep. for
AK Services, LLC
810-220-8110

cc: Pastor Ben Walls, Brighton Nazarene Church
State of Michigan Driver Testing Division
File

**NO
SKATING
IN
PARKING
LOT**

**DRUG
FREE
ZONE**





■ July 1st,2013.

To: Mr. Gary Anscombe, Project Manager
1767 Argentine
Howell, Michigan 48842

Sahba La'al , Architect

tel
734-761-2344
fax
734-761-3245

1450 Jones Drive
Ann Arbor
Michigan
48105
sahla@umich.edu
sahbalaal.com

Re:Brighton Church of the Nazarene
Project : 21305

Dear Gary,

This letter is to indicate that the proposed building addition and renovations to Brighton Church of the Nazarene located at 7669 Brighton Road, Brighton , Michigan 48116, will comply with all Fire Resistance and Fire Protection requirements of Michigan Building Code, 2009 as adopted by the municipality. This compliance will be within the renovations and as related to the existing Youth Center building directly to the North of the proposed building addition. This includes firewalls, fire distances between the buildings, sprinkler system etc.

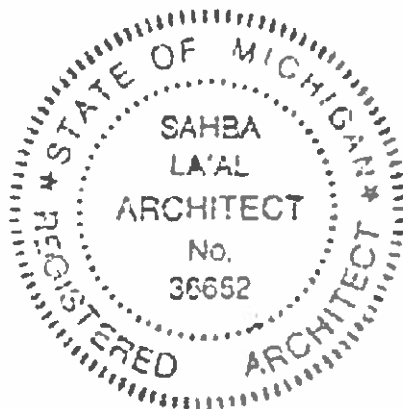
If you have any questions please contact me or Donald MacMullan.

Sincerely yours,



Sahba La'al, Architect, P.E., RA

Cc. Donald MacMullan



August 25, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, MI 48116

Re: The request by the Brighton Nazarene Church, 7669 Brighton Road for a Special Land Use for a 16,120 square foot gymnasium and classroom addition.

Dear Commission:

I just received the latest mailing on this, which includes an invitation to submit written comments, and I've decided to do that.

I suspect you know a bit about the history and ongoing conflict between the church and the surrounding properties, especially the Worden Lake Woods Homeowners Association located across the street from it, and don't wish to take up your time with a detailed review of it. Nevertheless, I do want to offer a few highlights that I know about and, if nothing else, give you my thoughts and concerns.

When I purchased my house in 2004, the dispute had been ongoing for at least four years, and I got a few scattered comments about the situation, but others who were here during that time can and I believe have fleshed out that time better than I. Briefly, I was told there was an agreement where the church was expected to maintain two rows of fir trees on the small bank of land that divided them from the association and the association was expected to maintain the grass growing down the bank to the street. However, those two rows of fir trees were and are barely one row. So that has caused contention. More on this later.

Also, I was told that the church youth center meant that a number of children of various ages were often doing things in the parking lot, in the row of trees just above the street, often onto the street, and at times even across the street onto our property (occasionally doing some damage) Furthermore, these children (mostly these teenagers) were often making a lot of noise, especially annoying in the middle of the night. Other concerns were expressed, but I think it a waste of your time to continue, as, again, others can and have expressed these with more knowledge than I can bring to the discussion.

Once I moved in, this is what I found. It is very common for people, especially teenagers to be doing things in the parking lot at any time during the day, evening, and most annoying, the night.

When I first moved in, it worried me, especially at night, because I would see the shadowed figures of two or three or more sitting or standing in the row of trees directly across from my house, looking straight at me (usually but not always teens). Believe me, it was strange, as if I was being watched. It was common for them to be smoking (don't know if it was cigarettes, pot, or what, though I have found injection needles that at least might be for harder drugs discarded on the bank and even on my lawn through the years, so someone is shooting up something).

It is also not at all uncommon to experience loud noises from the parking lot. Sometimes it's the result of an activity going on at the church, something I can live with on occasion, though I wish they would not hold outdoor events there, as happens, usually on a Saturday or Sunday. What is more bothersome is the noise during the middle of the night when young adults are racing their car engines (why I have no idea, though I suppose that's what teens do), turning up their radios or doing other things that literally wake me up from my sleep.

A more serious concern is that children of various ages (and some are very young) occasionally come running down the small bank, emerging suddenly from the trees and out onto the street. Sometimes they come down on bicycles and even occasionally on skateboards. This is a serious danger. If something is not done to prevent this, there will be a child run over by an automobile. I'm not saying maybe here. I'm saying it will happen. The only question is when. I am not looking forward to the day I have to say I told you so.

Others in the association have mentioned problems with trespassing, but I have not knowingly had those, though I do get annoyed when members of the church park on the street and leave behind one kind of garbage or another. As I understand it, they are told not to park there, and it is not a common thing, but it does happen.

So now, after years of problems with the church as it is, it wants to push the envelope even more. This most certainly increases the friction and dangers. I am not at all against whatever good-hearted intentions the church has for all of its youth activities, but it is not being good-hearted if it assumes those of us living near it should be willing to suffer because it already has outgrown its location and now wants to outgrow it even more. If something isn't put in place to placate those living near the church property, we're heading for a mess. And, by the way, I'm an easy-going person not at all prone to complaining, so imagine what others are thinking.

Here is the simple solution (certainly would make me feel better). Put up a wood, a brick or some other kind of ten foot solid fence down the side of the parking lot between the church and the association. Whatever the cost, it can't be near the kind of money getting spent on this latest construction. In other words, the church can afford it. This probably won't solve all of the problems, but it will go a long way to making me and I assume the rest of the association happy. Another row of fir trees, while two rows block off things better than one, will not solve the problems and might even cause more by providing better privacy for those looking for a place to do whatever. Some kind of wire or see through fence is a pretend solution and will not end the problems. It needs to be done right.

Okay, I have not gotten involved much in this conflict through the years, and I put off saying much this time as well, but I finally did get sparked to offer my views. And I emphasize these are my views, which I believe represent the rest of the association well in terms of the general situation, though each of the members no doubt has at least slightly different thoughts.

Take care, Harry Eiss



BOSS ENGINEERING

3121 E. Grand River
Howell, MI 48843

engineers
surveyors
planners
landscape
architects

GENOA TOWNSHIP

JUL 02 2013

RECEIVED

July 2, 2013

Ms. Kelly Van Marter
Genoa Township Hall
2911 Dorr Road
Brighton, MI 48116

Re: Brighton Nazarene Church Facility Expansion
Site Plan Review
Boss File No. 13-100

Dear Ms. Van Marter,

We have received the review letters from the fire department and Township consultants for the Brighton Nazarene Church Facility Expansion Site Plan review, and offer the following comments.

1. Landscape and lighting notes were clarified as "Existing" on sheet 2.
2. A "No New Signage Proposed" note was added to the site data on sheet 3.
3. A 500 Sq. Ft. Loading area was designated on sheet 3.
4. The proposed location of the Fire Hydrant was moved to the east side of the proposed building.
5. The proposed watermain connection was noted as a "cut-in sleeve and tee".
6. The proposed underground detention system was moved to better accommodate the storm water from catch basin 8.
7. Downspouts were added to the drainage plan on sheet 4. Roof drainage is to be piped to catch basin 8.
8. A Permanent private watermain easement note was added on sheet 4.
9. The watermain pipe type Cl. 54 was changed to Cl. 52 wrapped in polyethylene encasement to meet township standards.
10. Spot elevations were added to the proposed sidewalk on sheet 4 to help determine drainage patterns.
11. The "Stormwater Management Narrative" on sheet 4 was expounded upon to clarify the functionality of the underground detention system.
12. The lighting was adjusted to not exceed the 10-footcandle maximum on sheet 6.
13. Additional inverts, pipe length and slope notes were added to the drainage and utility plans to clarify the flow of the storm water on sheets 4 & 5.
14. A more detailed drawing of the underground detention system was included on the detail sheet 8 to further clarify the functionality and design of the system.
15. An additional detail sheet was added (sheet 9) to detail the proposed watermain.
16. An attached letter from the architect stating compliance with Building Fire Codes.

If you should have any questions regarding the modifications made to the plans, please do not hesitate to contact our office.

517.546.4836
Fax: 517.548.1670
e-mail: be@bosseng.com
www.bosseng.com

Ms. Kelly Van Marter
Brighton Nazarene Church Facility Expansion
July 2, 2013
Page 2

Regards,

BOSS ENGINEERING COMPANY

A handwritten signature in black ink, appearing to read "Thomas H. Dumond", with a long horizontal flourish extending to the right.

Thomas H. Dumond, R.L.A., LEED AP, C.P.S.I.
Director of Planning and Landscape Architect

CC: G:\13-100\DOCS\13-100L1.doc



LSL Planning, Inc.

Community Planning Consultants

August 20, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Brighton Nazarene – Special Land Use and Site Plan Review #3
Location:	7669 Brighton Road – northwest corner of Brighton and Aljoann Roads
Zoning:	SR Suburban Residential District

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 7/30/13), as well as the application for special land use (dated 5/29/13) proposing a 16,120 square foot addition to the existing Brighton Nazarene Church located at 7669 Brighton Road. The subject site and adjacent properties are zoned SR Suburban Residential District. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and Master Plan.

A. Summary

1. In our opinion, the general special land use standards of Article 19 and the specific use conditions of Article 3 are met.
2. Any issues raised by the Township Engineer or Fire Department must be addressed.
3. The Planning Commission has approval authority over the building elevations.
4. Planning Commission approval is required for the amount of parking proposed (134% of the minimum requirement).
5. Cut sheets of proposed light fixtures must be provided.
6. The Township may wish to request details of existing light fixtures to ensure compliance with current standards.

B. Proposal/Process

The applicant requests special land use and site plan review/approval for a 16,120 square foot addition to the existing Brighton Nazarene Church. The proposed addition is intended for a gymnasium and additional Sunday School classrooms.

Table 3.03 of the Township Zoning Ordinance lists churches as special land uses in the SR District. In accordance with Section 19.06, the proposed addition has been deemed a major amendment to an existing special land use. Therefore, a new application for special land use approval is required in addition to the need for site plan review/approval. Churches are also subject to the use conditions of Section 3.03.02(1).

A public hearing was held at the August 12, 2013 meeting, during which residents of the adjacent neighborhood identified several concerns with the current use of the site. Of note were the poor condition of existing landscape screening and issues caused by motorist training sessions in the parking lot. Following the public hearing, the Commission tabled the request to allow the applicant additional time to address the neighbors concerns.



Aerial view of site and surroundings (looking west)

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

- 1. Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties to the east and west as Low Density Residential. This classification is generally intended for single-family development on lots of at least 1-acre in area.

While the description in the Plan does not reference institutional uses specifically, there is an overall goal to “accommodate a variety of land uses that are located in a logical pattern and complement community goals, the surrounding land uses, environment, capacity of roads and the sanitary sewer, and public water system capabilities.”

In our opinion, the proposed project is consistent with this goal statement as an expansion to an existing institutional use in an area containing a mix of residential and other non-residential uses.

- 2. Compatibility.** The site is located on the north side of Brighton Road in an area already developed with a mix of institutional and single-family residential land uses. Brighton High School, a larger and more impactful institutional use, is located across Brighton Road to the southeast. Given the established land use pattern in this area of the Township, the proposed building addition is generally expected to be compatible with surrounding land uses, provided the dead/diseased trees are replaced as is proposed in the current submittal.
- 3. Public Facilities and Services.** The Impact Assessment notes that the site is currently served by public water and a septic system. The project engineer also indicates that they have met with the County Drain Commissioner to ensure appropriate stormwater management.

The site has access to a paved public roadway and the proposed addition is not expected to generate a substantial amount of additional traffic since its use will coincide with use of the existing facility. With that being said, the applicant must address any comments provided by the Township Engineer with respect to this criterion.

4. **Impacts.** The project area is located where a parking lot currently exists and is not expected to impact existing environmental features (Worden Lake is several hundred feet to the north).
5. **Mitigation.** If any additional concerns arise as part of this review process, the Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed project.

D. Use Conditions

Section 3.03.02(1) provides the following use conditions related to churches:

1. **Minimum lot area shall be three (3) acres plus an additional fifteen thousand (15,000) square feet for each one hundred (100) persons of seating capacity.**

The calculations on Sheet 3 identify an existing capacity of 520 seats in the worship area. This calculation requires a minimum lot area of roughly 5 acres, while the site contains 15.8 acres (net). This condition is met.

2. **Buildings of greater than the maximum height allowed in Section 3.04, Dimensional Standards, may be allowed provided front, side and rear yards are increased above the minimum required yards by one foot for each foot of building height that exceeds the maximum height allowed. The maximum height of a steeple shall be sixty (60) feet.**

The elevation drawings submitted provide a building height of approximately 23 feet for the proposed addition; Section 3.04 establishes a maximum building height of 35 feet. This condition is met.

3. **Wherever an off-street parking area is adjacent to a residential district, there shall be a minimum parking lot setback of fifty (50) feet with a continuous obscuring wall, fence and/or landscaped area at least four (4) feet in height shall be provided. The Township Board may reduce this buffer based on the provision of landscaping, the presence of existing trees or in consideration of topographic conditions.**

The site is adjacent to residential zoning (SR District) on each side. Much of the existing parking lot encroaches into the 50-foot setback along the east side; however, there is also an existing buffer area containing landscape screening in the form of several tightly spaced evergreen trees. Furthermore, the northerly parking area, which includes a new paved parking lot, meets or exceeds the required setback from both side lot lines, as well as the rear lot line.

Much of the discussion at the August 12th meeting revolved around the condition of the existing landscaping. In response, the applicant now proposes 20 new evergreen trees towards the north end of the site and has added a note stating that “all existing dead evergreens along buffer” are to be replaced.

4. **Private schools and child day care centers may be allowed as an accessory use to churches, temples and similar places of worship where the site has access to a paved public roadway.**

The proposed building addition contains classrooms, although as noted in the Impact Assessment they are intended for Sunday School and not a separate private school. Regardless, the site has access to a paved public roadway. This condition is met.

E. Site Plan Review

- 1. Dimensional Requirements.** As described in the table below, the project complies with the dimensional standards of the SR District:

District	Lot Size		Minimum Setbacks (feet)			Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard		
SR	1	100	40	20	50	35'	20% building 35% impervious
Proposal	15.8	331	207 (existing)	26.8 (proposed)	214 (existing for Parsonage)	23'	9.2% building 26.4% impervious

- 2. Building Materials and Design.** Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The submittal includes elevation views of two of the three building sides and generally utilizes a brick veneer and metal siding as primary materials. The east elevation includes brick columns matching those at the main church entrance. The addition also includes a pitched metal roof.

During the August 12th meeting, the applicant confirmed that the proposed addition will match the existing building in terms of materials and colors.

- 3. Parking and Vehicular Circulation.** In accordance with Section 14.04, churches and similar places of worship require 1 parking space for each 3 seats in the main unit of worship. Based upon the calculations provided by the project engineer, 174 spaces are required, while 233 are provided. The amount of parking proposed requires Planning Commission approval as it constitutes 134% of the minimum requirement (120% is the maximum allowed without such approval).

The parking spaces, drive aisles and number of barrier free spaces all meet or exceed the standards of Article 14.

- 4. Vehicular Circulation.** The site plan indicates use of the existing driveway along Brighton Road. As described above, all drive aisles meet or exceed minimum dimensional requirements and the site currently provides a drop off/pick up area along the main entrance to the worship area. The additional building and parking areas are expected to blend in with the established vehicular circulation pattern.
- 5. Loading.** Given the overall size of the buildings in combination, Section 14.08.08 requires upwards of 3 loading spaces, which are to be located in a rear or side yard not directly visible to a public street. The revised site plan includes a new loading area behind the proposed building addition.
- 6. Landscaping.** The site contains a significant amount of existing landscaping, including around the existing detention pond, along the east side lot line to buffer the existing single-family residences and within the undeveloped portion north of the buildings.

The revised plan includes 6 new canopy trees located in parking islands, as well as 34 new evergreen trees along the east and west side lot lines and 34 new shrubs to screen the play area and mechanical equipment in the west side yard.

As was discussed at the August 12th meeting, the applicant also proposes 3 new parking lot islands to break up the large expanses of pavement. Lastly, a note has been added stating that all existing trees that are dead will be replaced.


7. **Waste Receptacle and Enclosure.** The project includes a new waste receptacle and enclosure on the east side of the “skate park” building. Details, provided on Sheet 7, identify a base pad and screen enclosure consistent with the requirements of Section 12.04.
8. **Pedestrian Circulation.** Section 12.05 requires sidewalks and pathways along certain road frontages. For county primary roads designated on the pathways plan, which includes Brighton Road, an 8-foot asphalt pathway is required. Based upon review of aerial photos for the site, it appears the required pathway is already in place.
9. **Exterior Lighting.** Sheet 6 of the submittal identifies two new light poles in the newly paved parking area. Pole height and light intensity readings comply with Section 12.03, although fixture cut sheets need to be provided.

The site plan also identifies several existing light fixtures, but does not include any details. The Township may wish to request details and an expanded photometric plan to ensure that existing lighting complies with current requirements.

10. **Signs.** The applicant has confirmed that no new signage is proposed as part of this project.
11. **Impact Assessment.** The second submittal included a revised Impact Assessment (dated 7/2/13). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at borden@lslplanning.com.

Sincerely,
LSL PLANNING, INC.


Brian V. Borden, AICP
Senior Planner



August 8, 2013

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Brighton Nazarene Church Facility Expansion
Site Plan Review Resubmittal #2**

Dear Ms. Van Marter:

We have reviewed the resubmitted site plan documents from Boss Engineering dated August 1, 2013, which was provided by the Township dated July 3, 2013. The petitioner is proposing an approximate 16,120 square foot addition to an existing church facility located on a 16.43 acre parcel found on the north side Brighton Road, west of Aljoann Road in Brighton, Michigan. Tetra Tech reviewed the documents and offers the following additional comments:

SITE PLAN

Comments 1-4 below were included on the review letter date July 15, 2013 and were not addressed. Some additional clarity was added.

1. An additional fire hydrant near the bend adjacent to the west property line would be recommended to provide fire protection coverage to the western side of the site, as the addition of the new building will block previous access to this location. The length of hose to reach the NW corner of the skate park building is over 300 feet.
2. The water main is currently shown nearly touching the proposed underground stormwater detention system. It is recommended that the water main be bent and relocated around the system to the furthest extent possible if Ten States Standards for separation or clearance from the building footing cannot be kept.
3. Water main should be at least 20 feet from any building, per standards. Petitioner should check the dimensions shown across the west side of the new addition to verify this clearance can be met. If it cannot, then a written request for a design exception would be needed for the owner to consider.

Tetra Tech

401 South Washington Square, Suite 100, Lansing, MI 48933
Tel 517.316.3930 Fax 517.484.8140 www.tetrattech.com

4. The location of the existing and any new water service connections should be clearly shown on the drawing. If the existing building water service currently enters the building where the proposed addition is planned to be, then commercial water service connection shall be show to be relocated to outside the proposed building footprint. If the locations of the existing service lines are unknown, then a note should be included on future construction drawings to locate the connection so the appropriate actions may be taken.

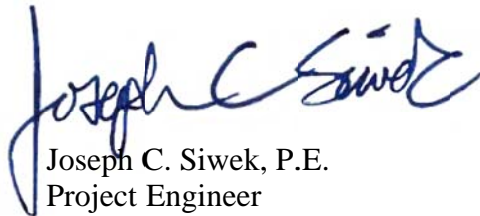
The petitioner has not responded to several comments previously submitted, which should be addressed prior to final site plan approval.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Unit Vice President



Joseph C. Siwek, P.E.
Project Engineer

copy: Scott Tousignant, P.E., Boss Engineering



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

810-229-6640 Fax: 810-229-1619

August 6, 2013

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Brighton Nazarene Church Expansion
7669 Brighton Rd.
Revised Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned revised site plan. The original plan was reviewed on June 24, 2013 and again on July 15, 2013. The current plans were received for review on August 1, 2013 and the revised drawings are dated July 30, 2013. The project is based on building a 16,120 S.F. expansion to the existing church building (size of existing building not provided). The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

The applicant has attempted to address the fire department's concerns by submitting a letter from an Architect stating that the submittal meets the requirements of the Michigan Building Code. However, the plan does not meet the requirements of the Township's adopted fire prevention code for site and building accessibility.

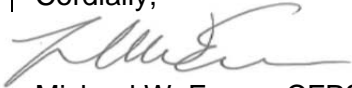
The following items still need to be properly addressed.

1. The access to the building appears to be limited by an overhang that may not meet the minimum standard of 13.5'. Additional details of this canopy/overhand shall be provided.
IFC 503.2.1
2. Access to and from the building shall provide emergency vehicles with an outside turning radius of 50' and a minimum vertical clearance of 13 ½ feet. ***A plan with a truck turning template applied would satisfy the turning radius requirement.***
IFC 503.2.4
3. Fire apparatus roads shall be provided to extend to within 150' of all portions of the facility's outer walls. The entire west perimeter wall does not meet this standard. The fire code allows an exception where the entire building is protected with an automatic sprinkler system. The building shall be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems* in order to have relief from the access requirement.

IFC 503.1.1, 903

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

| Cordially,

A handwritten signature in black ink, appearing to read "Michael W. Evans". The signature is fluid and cursive, with a large initial "M" and "E".

Michael W. Evans, CFPS
Deputy Chief

**IMPACT ASSESSMENT
FOR
SITE PLAN PETITION
“BRIGHTON NAZARENE CHURCH FACILITY EXPANSION”
GENOA TOWNSHIP, LIVINGSTON COUNTY
MICHIGAN**

Prepared for:

**BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MICHIGAN 48116
(810) 227-6600**

Prepared by:

**BOSS ENGINEERING COMPANY
3121 E. GRAND RIVER
HOWELL, MI 48843
(517) 546-4836**

July 2, 2013

13-100EIA

INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development may have on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the *Submittal Requirements For Impact Assessment* guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

DISCUSSION ITEMS

A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.

Prepared By :
Brent W. LaVanway, P.E.
BOSS ENGINEERING COMPANY
Civil Engineers, Land Surveyors, Landscape Architects and Planners
3121 E. Grand River
Howell, MI 48843
(517) 546-4836

Prepared For :
Brighton Nazarene Church
Owner of property
7669 Brighton Road
Brighton, MI 48116
(810) 227-6600

B. Map(s) and written description / analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.

The site is located on the north side of Brighton Road immediately west of the Worden Lake Woods development and slightly west of the entrance to Brighton High School. The subject property is currently the Brighton Nazarene Church Facility. There is the existing church building, parking lot, detention basin and parsonage. The north end of the property is heavily wooded. There are established tree row buffers on the east and west property lines. The subject property and both adjacent properties are zoned Suburban Residential (SR). The Brighton Nazarene Church also owns the contiguous parcel to the north.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.

The total site area is 16.43 acres. The front (south) portion of the site is the existing Church facility, associated parking lot, detention basin and parsonage. The developed site slopes south toward Brighton Road and the remainder of the site slopes north toward Worden Lake. The undeveloped portion of the site is predominantly wooded with the north end of the parcel terminating at Worden Lake. The USDA Soil Conservation Service soil classification for the site is Boyer-Oshtemo Loamy Sand.

The proposed building addition is located in an existing parking lot which will be relocated as part of the project. No tree removal is anticipated during construction of this expansion.

D. Impact on storm water management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from County Soil Conservation Service.

Surface runoff during periods of construction will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence, pea stone filters, and seed and mulch. A meeting was held with the Livingston County Drain Commissioner to address stormwater management. Their primary recommendation is to maintain the existing drainage patterns as closely as possible.

At the time of construction, there may be some temporary dust, noise, vibration and smoke, but these conditions will be of relatively short duration and shall be controlled by applying appropriate procedures to minimize the effects, such as watering if necessary for dust control.

The Site Plan documents show the proposed locations of all site improvements along with detailed soil erosion control information. The plans will be reviewed by the Livingston County Drain Commissioner's office for compliance with their regulations prior to issuance of a Soil Erosion Control permit.

E. Impact on surrounding land use: Description of the types of proposed uses and other man made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.

As previously stated the site is the current home of the Brighton Nazarene Church. This facility expansion project will provide a larger gymnasium and additional Sunday School classrooms. The classrooms are only for Sunday School and are not for a 5 day per week school. The existing gymnasium will be converted to additional Sunday School classrooms. All other uses at the Church will remain as they are now. The parking that is displaced with the building addition will be added toward the north end of the site and an underground detention system will be constructed under the new parking lot to address stormwater management.

The increase in light, noise or air pollution would be negligible given the site is already developed.

F. Impact on public facilities and services: Description of number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.

The primary use of the facility is for Sunday Church services however additional activities take place throughout the week. These activities vary from small group meetings to additional worship services. Typically these occur during off peak traffic hours thus do not significantly impact the traffic on Brighton Road. The site is serviced by public water and a septic system. The public water is provided by the City of Brighton. The septic system review is under the jurisdiction of the Livingston County Health Department. There is no expected impact on Brighton Area Schools and very minimal impact on the police and fire departments.

G. Impact on public utilities: Description of the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites service with sanitary sewer, calculations for pre- and post development flows shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.

The development is currently served by both public water and septic system. With regards to storm water management, the project would be required to meet all local, county and state storm water and erosion control requirements. All of the required information is included in the Site Plan documents.

H. Storage or handling of any hazardous materials: Description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.

There will be no hazardous materials used or disposed of on this site.

I. Impact on traffic and pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in Michigan.

The Church expansion project will generate a negligible number of trips during the AM and PM peak hours Monday through Friday. Most of the traffic will be generated on Sunday mornings for worship services. Some traffic will occur during the week for various activities that take place. Little of this traffic will occur during peak traffic hours.

J. A detailed traffic impact study shall be submitted for any site over ten (10) acres in size which would be expected to generate 100 directional vehicle trips (i.e. 100 inbound or 100 outbound trips) during the peak hour of traffic of the generator or on the adjacent streets.

The facility is primarily used on Sunday mornings therefore a detailed traffic impact study is not necessary.

K. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.

The Church requires a Special Use Permit to operate in a residentially zoned district.

L. A list of all sources shall be provided.

Genoa Township's *Submittal Requirements For Impact Assessment*

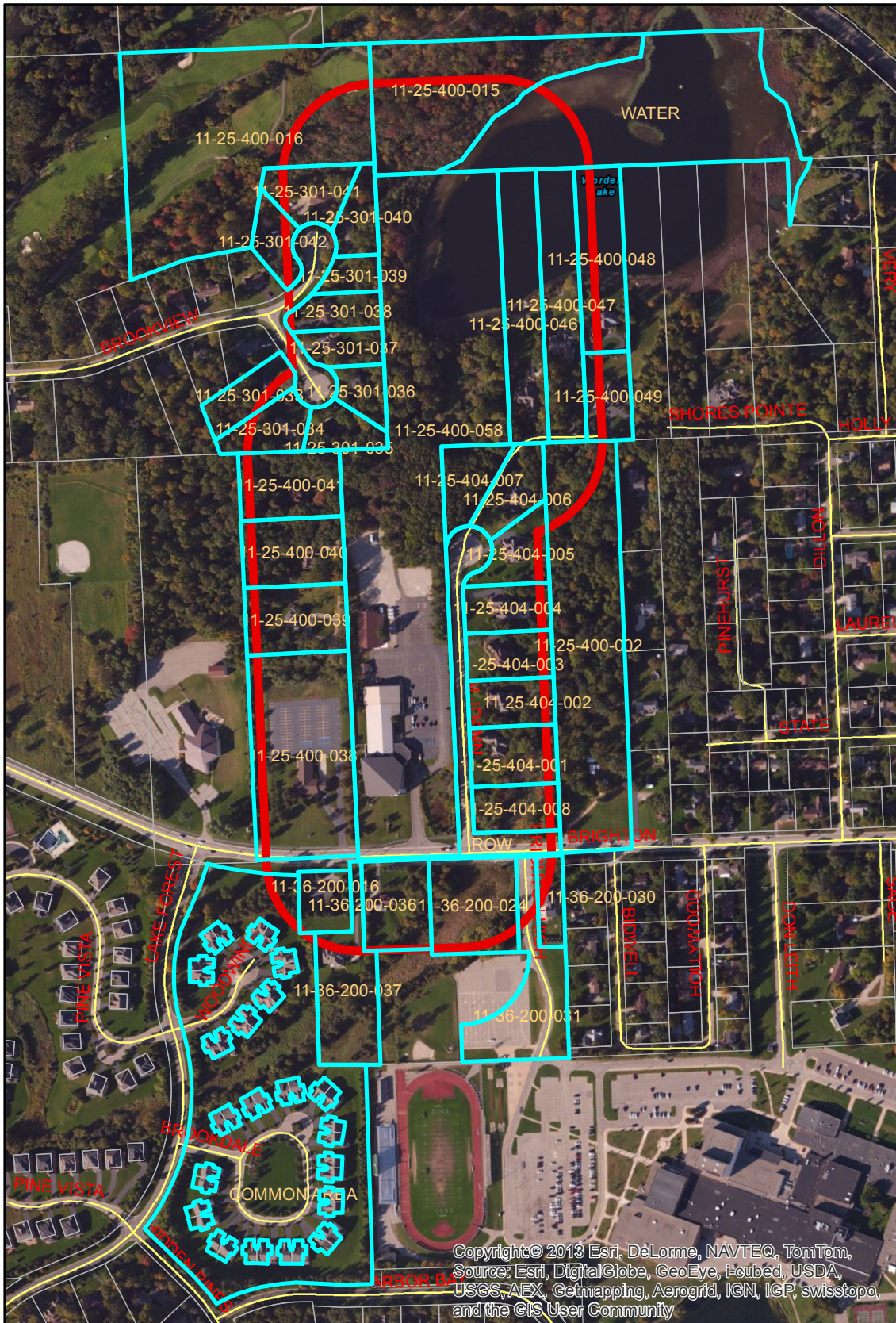
Genoa Township Zoning Ordinances

Soil Survey of Livingston County, Michigan, U.S.D.A. Soil Conservation Service

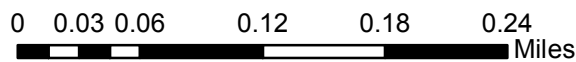
National Wetland Inventory Plan, United States Department of the Interior, Fish and Wildlife Service

APPENDIX

300 ft Buffer for Noticing



June 19, 2013



Variance Case #13-06
Applicant: Brighton Nazarene Church, Gary Anscombe
Parcel: 11-25-400-058
Meeting Date: July 22, 2013



2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

August 22, 2013

To Whom It May Concern:

There will be a hearing for a Special Land Use Permit in your general vicinity on Monday, September 9 at 6:30 p.m. at Genoa Township Hall, located at 2911 Dorr Road, Brighton, Michigan.

The property in question is located at Brighton Nazarene Church, 7669 Brighton Road. The Special Land Use has been requested for a 16,120 square foot gymnasium and classroom addition. The request is petitioned by Brighton Nazarene Church.

Materials relating to this request are available for public inspection at the Genoa Township Hall during regular business hours. If you have any questions or objections in this regard, please be present at the public hearing noted above. Written comments may be addressed to the Planning Commission.

Sincerely,

Kelly VanMarter
Assistant Township Manager / Community Development Director
KKV/kp

SUPERVISOR
Gary T. McCririe

CLERK
Paulette A. Skolarus

TREASURER
Robin L. Hunt

MANAGER
Michael C. Archinal

TRUSTEES
H. James Mortensen
Jean W. Ledford
Todd W. Smith
Linda Rowell

SITE PLAN FOR BRIGHTON NAZARENE CHURCH FACILITY EXPANSION

PART OF SE 1/4 SEC. 25, T.2N., R.5E. GENOA TOWNSHIP, LIVINGSTON COUNTY, MI

PROPERTY DESCRIPTION:

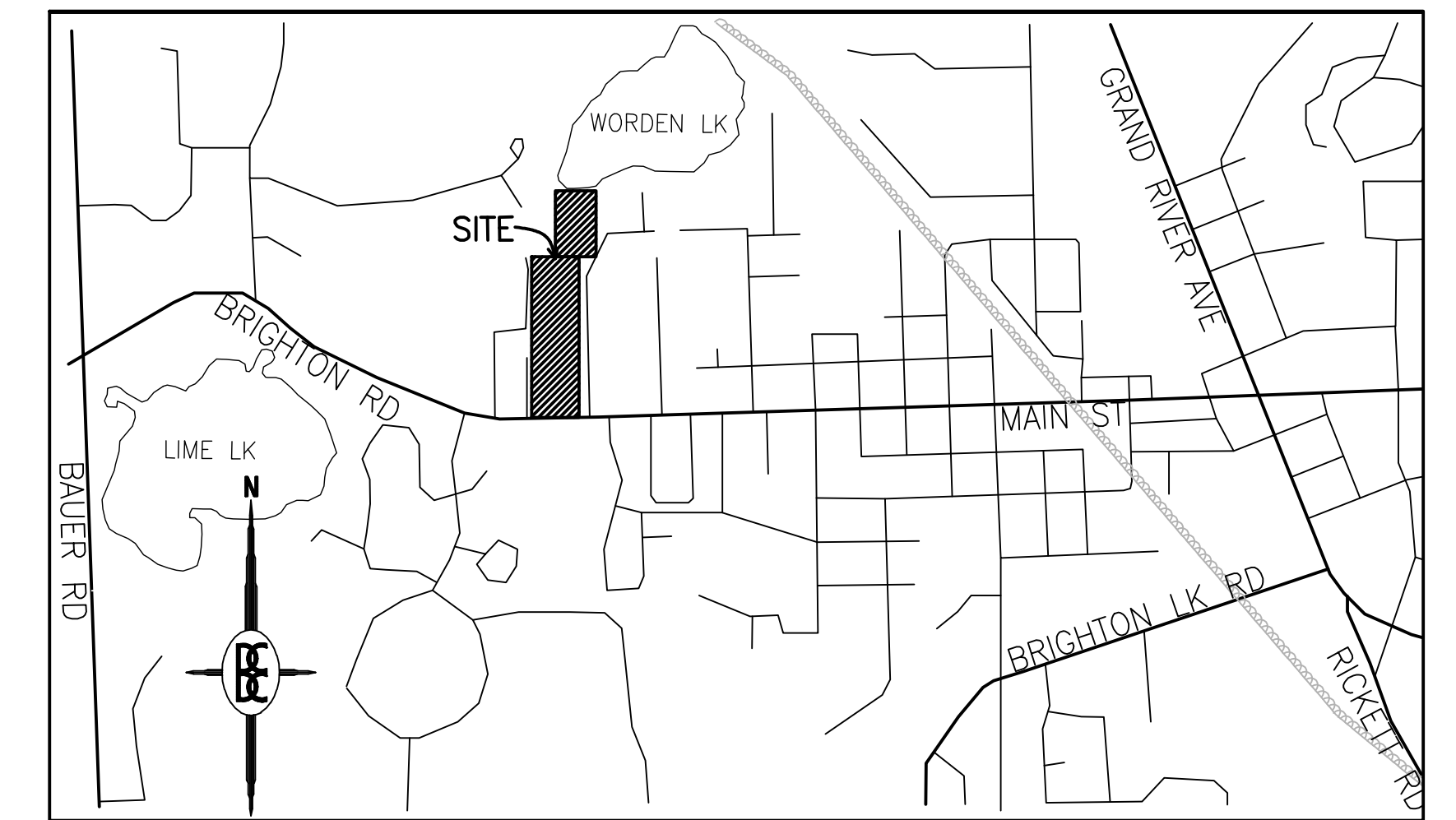
A part of the SE 1/4 of Section 25, T2N-R5E thence N 89°08'13" E 663.28 feet to Point of Beginning, thence continue E 331.64 feet, thence N 01°21'30" W 1341.53 feet, thence S 89°03'20" E 332.74 feet, thence S 01°24'19" E 1341.56 feet to Point of Beginning and also Section 25, T2N-R5E Beginning at the SE 1/4 corner, thence N 01° W 1340.63 feet thence N 89° E 823.63 feet to Point of Beginning, thence N 01° W 891.73 feet, thence N 88° E 400.81 feet, thence S 01° E 893.61 feet, thence S 89° W 400.83 feet to Point of Beginning, containing 16.43 acres, more or less split on 01/23/2012 with 4711-25-400-027 into 4711-25-400-058

CONSTRUCTION NOTES

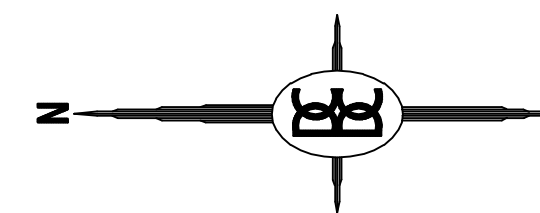
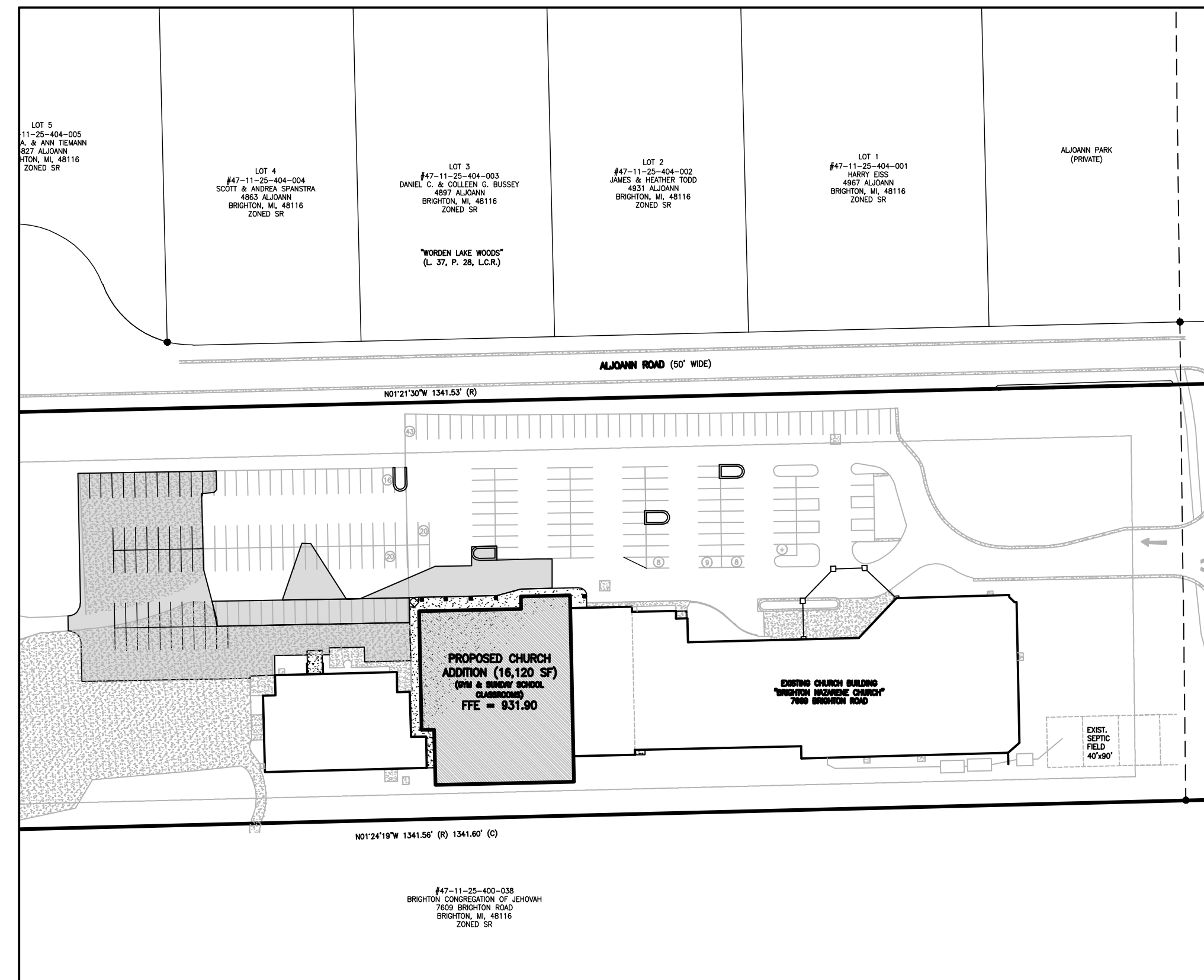
- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
 - DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
 - A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
 - IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
 - ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
 - PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
 - ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
 - ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
 - THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
 - THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
 - THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
 - THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
 - THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
 - ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MIDOT CLASS II).
 - ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MIDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
 - NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
 - DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
 - IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
 - NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
 - ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
 - ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
 - TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
 - ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
 - AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
 - ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
 - NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
 - ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
 - SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
 - ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.



LOCATION MAP
NO SCALE



OVERALL SITE MAP
NO SCALE

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
4	GRADING, DRAINAGE & SOIL EROSION CONTROL PLAN
5	UTILITY PLAN
6	LANDSCAPE & LIGHTING PLAN
7	CONSTRUCTION NOTES & DETAILS
8	UNDERGROUND DETENTION DETAILS
9	CONSTRUCTION NOTES & DETAILS
10	FLOOR PLAN
11	ELEVATION VIEWS

BRIGHTON NAZARENE CHURCH FACILITY EXPANSION

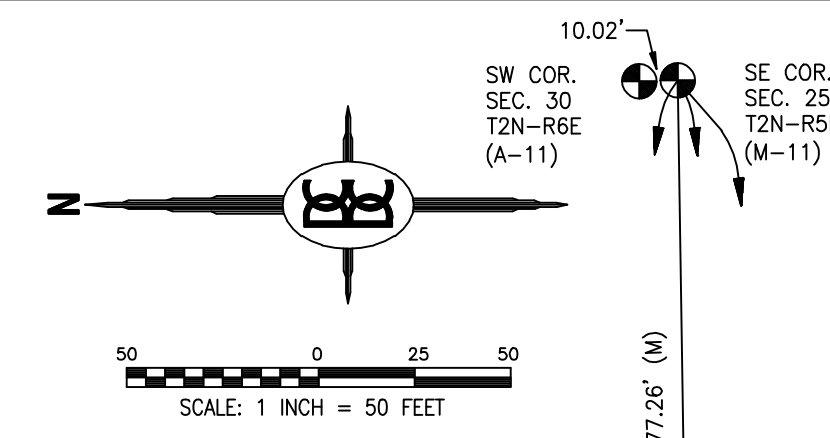
PREPARED FOR:

BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
CONTACT: PASTOR BEN WALLS
810.227.6600

PREPARED BY:



						1
2	ST	PER PLANNING COM.	7/30/13			
1	ST	TWP. REVIEW	7/2/13	ISSUE DATE: 5/31/13		
NO	BY	CK	REVISION	DATE	JOB NO. 13-100	

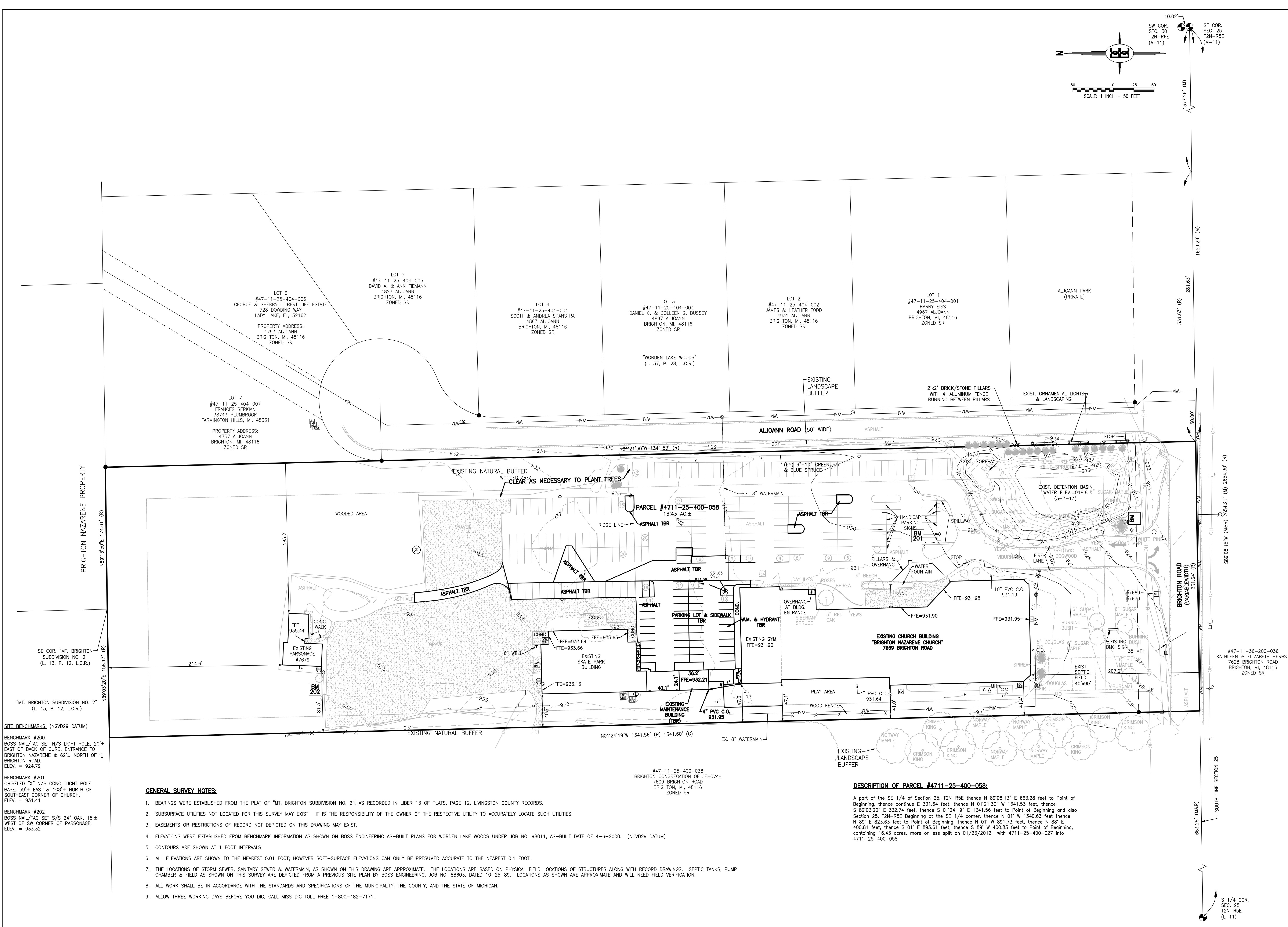


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B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

PROJECT:	B.N.C. FACILITY EXPANSION		
PREPARED FOR:	BRIGHTON NAZARENE CHURCH		
TITLE:	EXISTING CONDITIONS & DEMOLITION		
DATE:	7/30/13	DATE:	6/25/13
NO. BY:	1	NO. BY:	1
REVISION PER:		REVISION PER:	
DESIGNED BY:	AEB		
CHECKED BY:			
SCALE:	1" = 50'		
JOB NO.:	13-100		
DATE:	5-31-13		
SHEET NO.:	2		



GENERAL SURVEY NOTES:

- BEARINGS WERE ESTABLISHED FROM THE PLAT OF "MT. BRIGHTON SUBDIVISION NO. 2", AS RECORDED IN LIBER 13 OF PLATS, PAGE 12, LIVINGSTON COUNTY RECORDS.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- ELEVATIONS WERE ESTABLISHED FROM BENCHMARK INFORMATION AS SHOWN ON BOSS ENGINEERING AS-BUILT PLANS FOR WORDEN LAKE WOODS UNDER JOB NO. 98011, AS-BUILT DATE OF 4-6-2000. (NGVD29 DATUM)
- CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
- ALL ELEVATIONS ARE SHOWN TO THE NEAREST 0.01 FOOT; HOWEVER SOFT-SURFACE ELEVATIONS CAN ONLY BE PRESUMED ACCURATE TO THE NEAREST 0.1 FOOT.
- THE LOCATIONS OF STORM SEWER, SANITARY SEWER & WATERMAIN, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH RECORD DRAWINGS, SEPTIC TANKS, PUMP CHAMBER & FIELD AS SHOWN ON THIS SURVEY ARE DEPICTED FROM A PREVIOUS SITE PLAN BY BOSS ENGINEERING, JOB NO. 88603, DATED 10-25-89. LOCATIONS AS SHOWN ARE APPROXIMATE AND WILL NEED FIELD VERIFICATION.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
- ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.

DESCRIPTION OF PARCEL #4711-25-400-058:

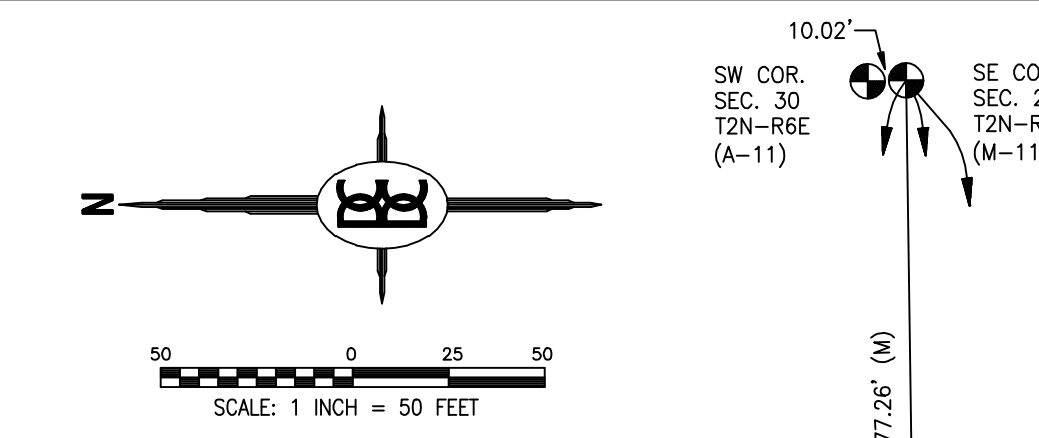
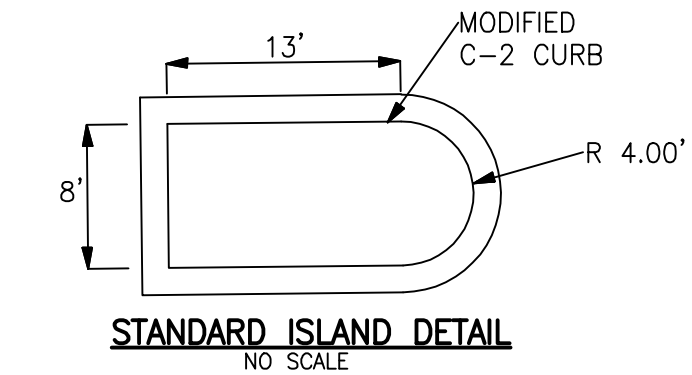
A part of the SE 1/4 of Section 25, T2N-R5E thence N 89°08'13" E 663.28 feet to Point of Beginning, thence continue E 331.64 feet, thence N 01°21'30" W 1341.53 feet, thence S 89°03'20" E 332.74 feet, thence S 01°24'19" E 1341.56 feet to Point of Beginning and also Section 25, T2N-R5E Beginning at the SE 1/4 corner, thence N 01° W 1340.63 feet thence N 89° E 823.63 feet to Point of Beginning, thence N 01° W 891.73 feet, thence N 88° E 400.81 feet, thence S 01° E 893.61 feet, thence S 89° W 400.83 feet to Point of Beginning, containing 16.43 acres, more or less split on 01/23/2012 with 4711-25-400-027 into 4711-25-400-058

SITE BENCHMARKS: (NGVD29 DATUM)
BENCHMARK #200
BOSS NAIL/TAG SET N/S LIGHT POLE, 20'± EAST OF BACK OF CURB, ENTRANCE TO BRIGHTON NAZARENE & 62'± NORTH OF BRIGHTON ROAD.
ELEV. = 924.79
BENCHMARK #201
CHISELED "X" N/S CONC. LIGHT POLE BASE, 50'± EAST & 108'± NORTH OF SOUTHEAST CORNER OF CHURCH.
ELEV. = 931.41
BENCHMARK #202
BOSS NAIL/TAG SET S/S 24" OAK, 15'± WEST OF SW CORNER OF PARSONAGE.
ELEV. = 933.32

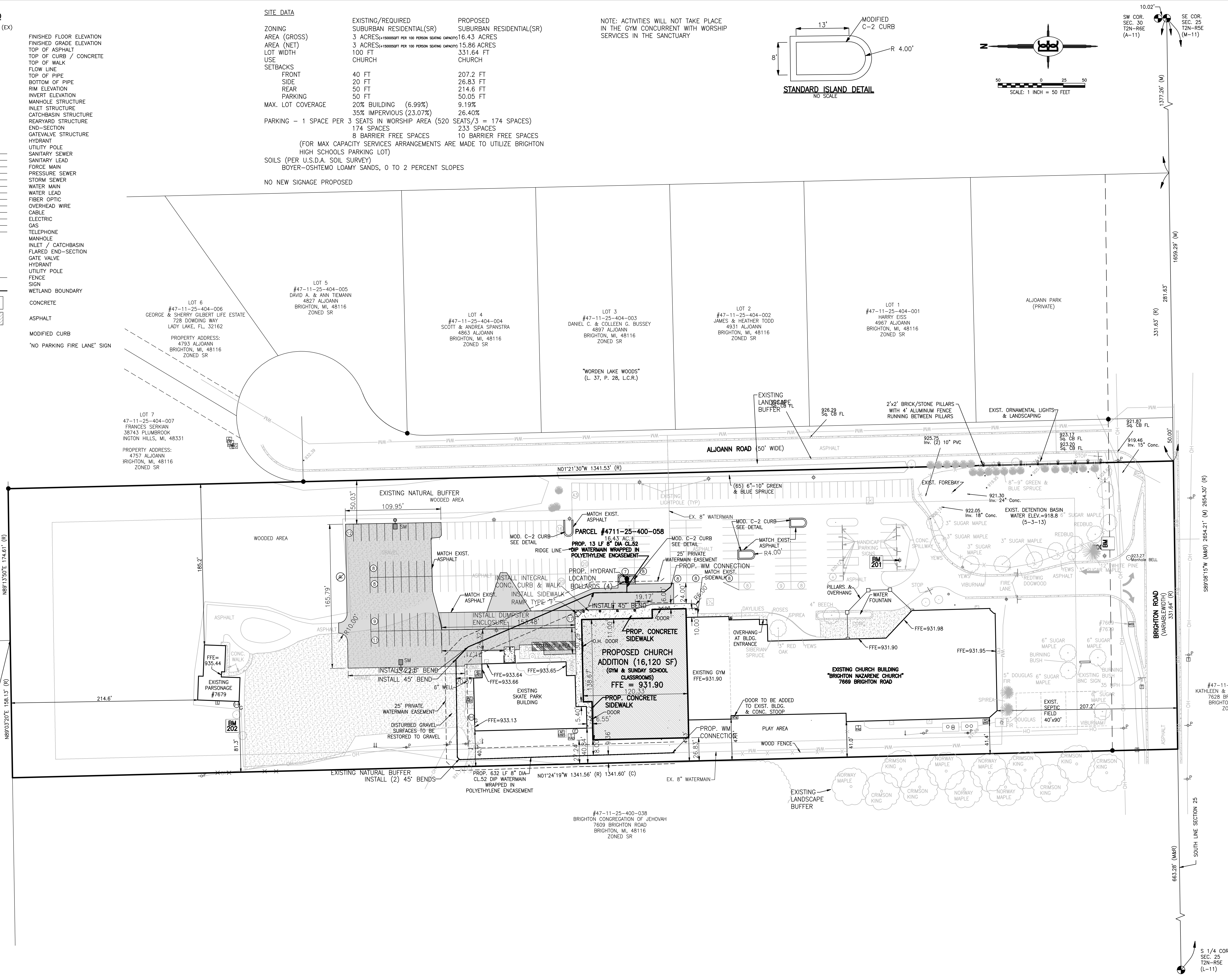
PROPOSED (PR)	EXISTING (EX)	
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARYARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
MH	MH	MANHOLE
IN	IN	INLET / CATCHBASIN
FL	FL	FLARED END-SECTION
GV	GV	GATE VALVE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
F	F	FENCE
S	S	SIGN
WB	WB	WETLAND BOUNDARY
CONC	CONC	CONCRETE
ASPH	ASPH	ASPHALT
MOD C	MOD C	MODIFIED CURB
NPK	NPK	'NO PARKING FIRE LANE' SIGN

SITE DATA	EXISTING/REQUIRED	PROPOSED
ZONING	SUBURBAN RESIDENTIAL(SR)	SUBURBAN RESIDENTIAL(SR)
AREA (GROSS)	3 ACRES(15000SFT PER 100 PERSON SEATING CAPACITY)	16.43 ACRES
AREA (NET)	3 ACRES(15000SFT PER 100 PERSON SEATING CAPACITY)	15.86 ACRES
LOT WIDTH	100 FT	331.64 FT
USE	CHURCH	CHURCH
SETBACKS		
FRONT	40 FT	207.2 FT
SIDE	20 FT	28.83 FT
REAR	50 FT	214.6 FT
PARKING	50 FT	50.05 FT
MAX. LOT COVERAGE	20% BUILDING (6.99%) 35% IMPERVIOUS (23.07%)	9.19% 26.40%
PARKING - 1 SPACE PER 3 SEATS IN WORSHIP AREA (520 SEATS/3 = 174 SPACES)		233 SPACES
	8 BARRIER FREE SPACES	10 BARRIER FREE SPACES
	(FOR MAX CAPACITY SERVICES ARRANGEMENTS ARE MADE TO UTILIZE BRIGHTON HIGH SCHOOLS PARKING LOT)	
SOILS (PER U.S.D.A. SOIL SURVEY)	BOYER-OSTEMO LOAMY SANDS, 0 TO 2 PERCENT SLOPES	
	NO NEW SIGNAGE PROPOSED	

NOTE: ACTIVITIES WILL NOT TAKE PLACE IN THE GYM CONCURRENT WITH WORSHIP SERVICES IN THE SANCTUARY



BRIGHTON NAZARENE PROPERTY



THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT. THE DESIGNER ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DOCUMENT. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR ANY DELAYS OR COSTS INCURRED BY THE CLIENT AS A RESULT OF CHANGES TO THE PROJECT OR FAILURE TO OBTAIN NECESSARY PERMITS AND APPROVALS. THE CLIENT SHALL NOTIFY THE DESIGNER OF ANY CHANGES TO THE PROJECT AS SOON AS POSSIBLE. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR ANY DELAYS OR COSTS INCURRED BY THE CLIENT AS A RESULT OF CHANGES TO THE PROJECT OR FAILURE TO OBTAIN NECESSARY PERMITS AND APPROVALS. THE CLIENT SHALL NOTIFY THE DESIGNER OF ANY CHANGES TO THE PROJECT AS SOON AS POSSIBLE.

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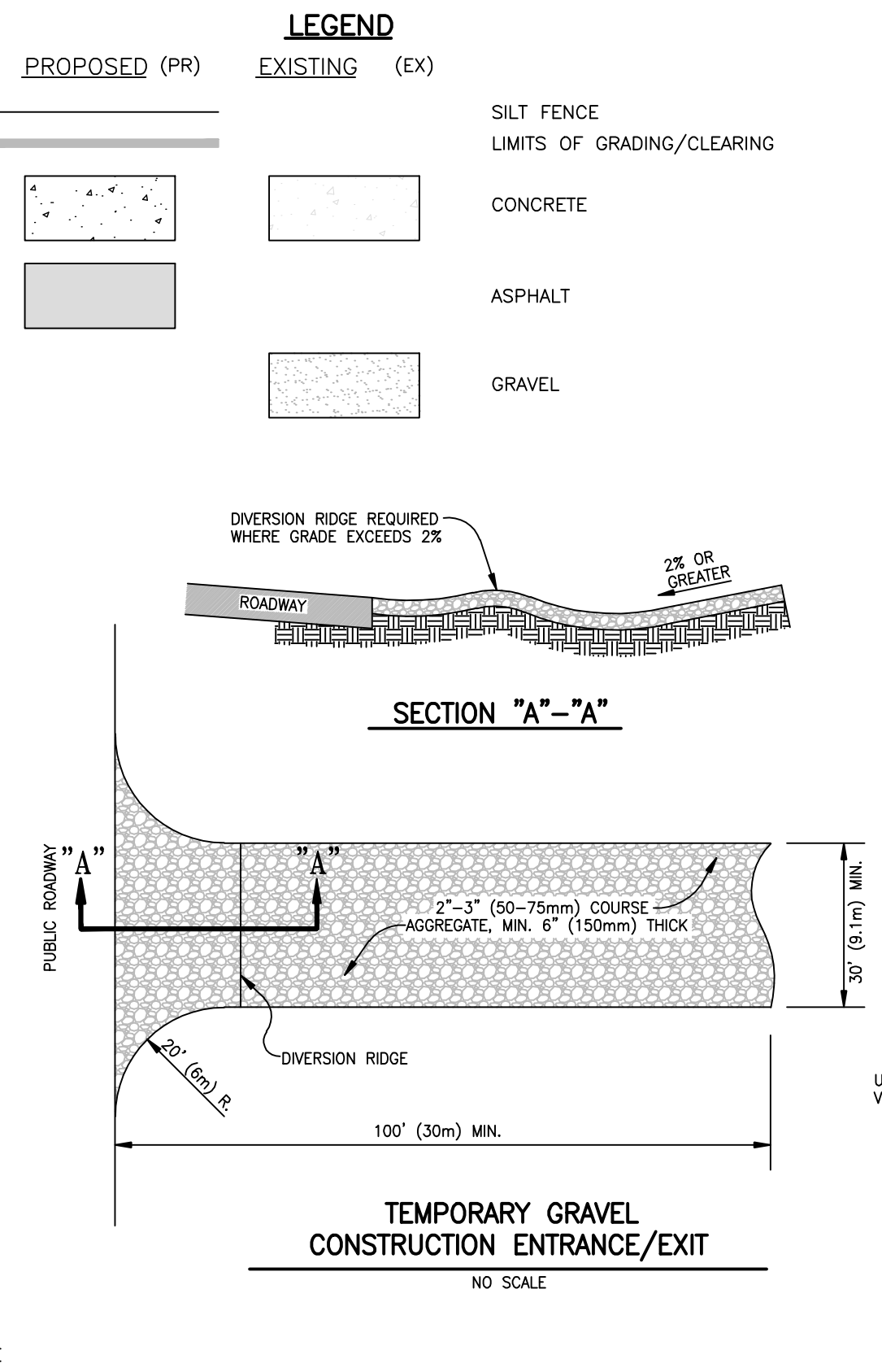
B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

SITE PLAN

DESIGNED BY:	AEB
DRAWN BY:	AEB
CHECKED BY:	
SCALE:	1" = 50'
JOB NO.:	13-100
DATE:	5-31-13
SHEET NO.:	3

LEGEND	
PROPOSED (PR)	EXISTING (EX)
900	900
T/C	XXXXXX
+922.08	
FF	FF
FG	FG
T/A	T/A
T/C	T/C
T/W	T/W
F/L	F/L
T/P	T/P
B/P	B/P
RIM	RIM
INV	INV
MH	MH
IN	IN
CB	CB
RY	RY
ES	ES
GV	GV
HY	HY
UP	UP
SN	SN
SL	SL
FM	FM
ST	ST
WM	WM
WL	WL
OH	OH
C	C
E	E
T	T
TR	TR
CSB	NFV
54T	
54T	
54T	
54T	

LEGEND	
PROPOSED (PR)	EXISTING (EX)
SPOT ELEVATION	
FINISHED FLOOR ELEVATION	
FINISHED GRADE ELEVATION	
TOP OF ASPHALT	
TOP OF CURB / CONCRETE	
TOP OF WALK	
FLOW LINE	
BOTTOM OF PIPE	
RIM ELEVATION	
INVERT ELEVATION	
MANHOLE STRUCTURE	
INLET STRUCTURE	
CATCHBASIN STRUCTURE	
REARWARD STRUCTURE	
END-SECTION GATEVALVE STRUCTURE	
HYDRANT	
UTILITY POLE	
SANITARY SEWER	
SANITARY LEAD	
FORCE MAIN	
STORM SEWER	
WATER MAIN	
WATER LEAD	
OVERHEAD WIRE	
CABLE	
ELECTRIC	
GAS	
TELEPHONE	
MANHOLE	
INLET / CATCHBASIN	
FLARED END-SECTION	
GATE VALVE	
HYDRANT	
UTILITY POLE	
FENCE	
NOT FIELD VERIFIED TO BE REMOVED	
COMPACTED SAND BACKFILL	
SANITARY SEWER LABEL	
STORM SEWER LABEL	
WATER MAIN LABEL	
SOIL EROSION CONTROL MEASURE	



STORMWATER MANAGEMENT NARRATIVE

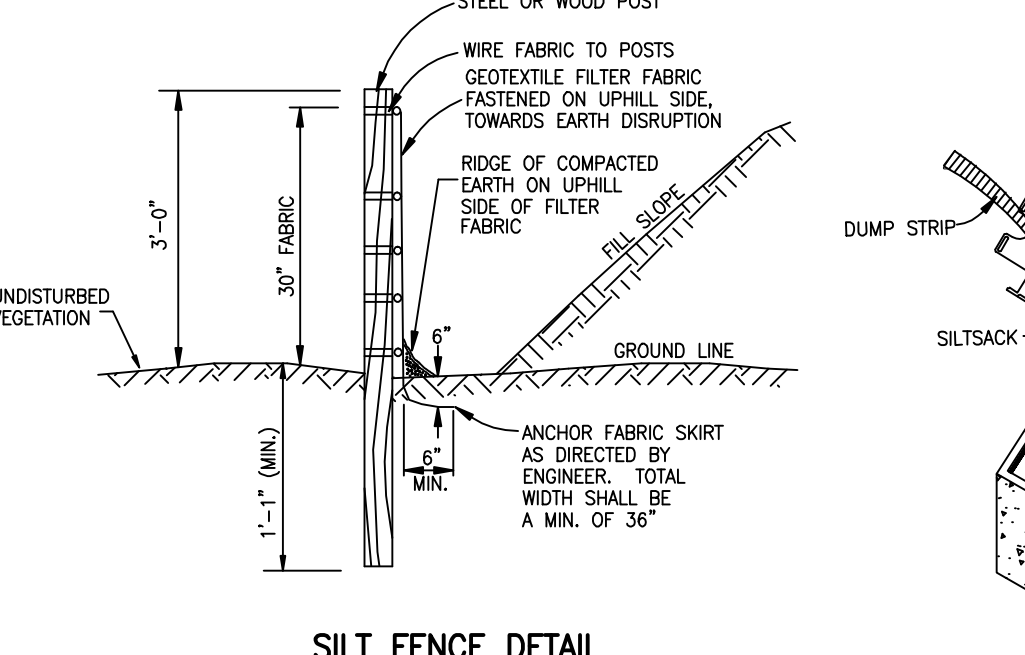
THE EXISTING FOREBAY AND DETENTION BASIN ACCEPT STORM DRAINAGE FROM THE CURRENT DEVELOPED SITE. THE BASIN OUTLETS TO THE BRIGHTON ROAD DITCH, CROSSES UNDER BRIGHTON ROAD AND CONTINUES TO THE SOUTHWEST. DUE TO SPACE RESTRICTIONS THE EXISTING BASIN CANNOT BE EASILY EXPANDED SO AN UNDERGROUND DETENTION SYSTEM IS PROPOSED TO STORE THE VOLUME FROM A 100YR STORM FROM THE ADDITIONAL IMPERVIOUS SURFACE RESULTING FROM THE PROPOSED IMPROVEMENTS.

IN THE UNDERGROUND DETENTION SYSTEM, WATER WILL FIRST FLOW INTO THE INLET STRUCTURE OF THE UNDERGROUND DETENTION BASIN WHERE IT IS DIRECTED INTO THE ISOLATOR ROW. AN OVERFLOW WALL IN THE INLET STRUCTURE WILL ALLOW WATER TO FLOW DIRECTLY INTO THE REMAINING THREE CHAMBER ROWS BEFORE WATER BACKS UP INTO THE INVERT LEADING TO STORM MANHOLE 2. IN THE CASE OF THE DETENTION SYSTEM FILLING TO CAPACITY, THE WATER WILL THEN FLOW OUT OF THE OUTLET STRUCTURE INTO THE EXISTING STORM SYSTEM.

AN EMERGENCY SPILLWAY IS PROPOSED LEADING TO CATCH BASIN 7. THE EMERGENCY SPILLWAY IS PROPOSED IN CASE OF FAILURE TO CATCH BASIN 8. DUE TO THE RELATIVE LOCATION OF CATCH BASIN 8 TO THE PROPOSED CHURCH ADDITION, AN EMERGENCY SPILLWAY WILL PREVENT WATER FROM FLOODING THE PROPOSED CHURCH ADDITION.

THE ROOF DRAINAGE FOR THE PROPOSED BUILDING WILL BE PIPED INTO CATCH BASIN 8 VIA 7 DOWNSPOUTS (4 IN FRONT, 3 IN BACK).

CONSTRUCT LANDSCAPE ISLANDS TO MAINTAIN EXISTING DRAINAGE AND TO DRAIN AWAY FROM ISLANDS.



LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS

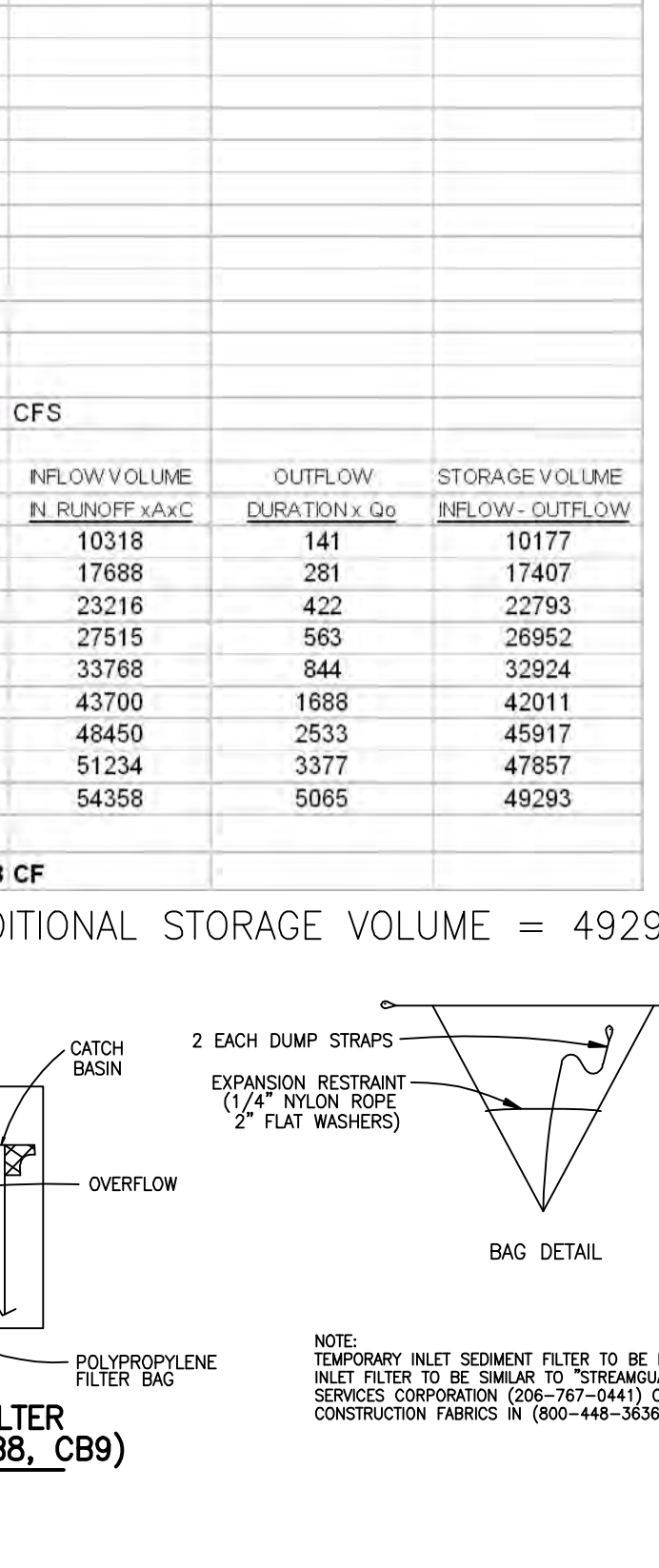
PROPOSED CONDITIONS		EXISTING CONDITIONS	
AREA (ACRES)	IMPERVIOUS FACTOR	AREA (ACRES)	IMPERVIOUS FACTOR
4.01	0.9	3.45	0.9
0.00	0.7	0.44	0.7
0.68	0.2	0.72	0.2

LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS	
EXISTING CONDITIONS	PROPOSED CONDITIONS
AREA (ACRES)	IMPERVIOUS FACTOR
3.45	0.9
0.44	0.7
0.72	0.2

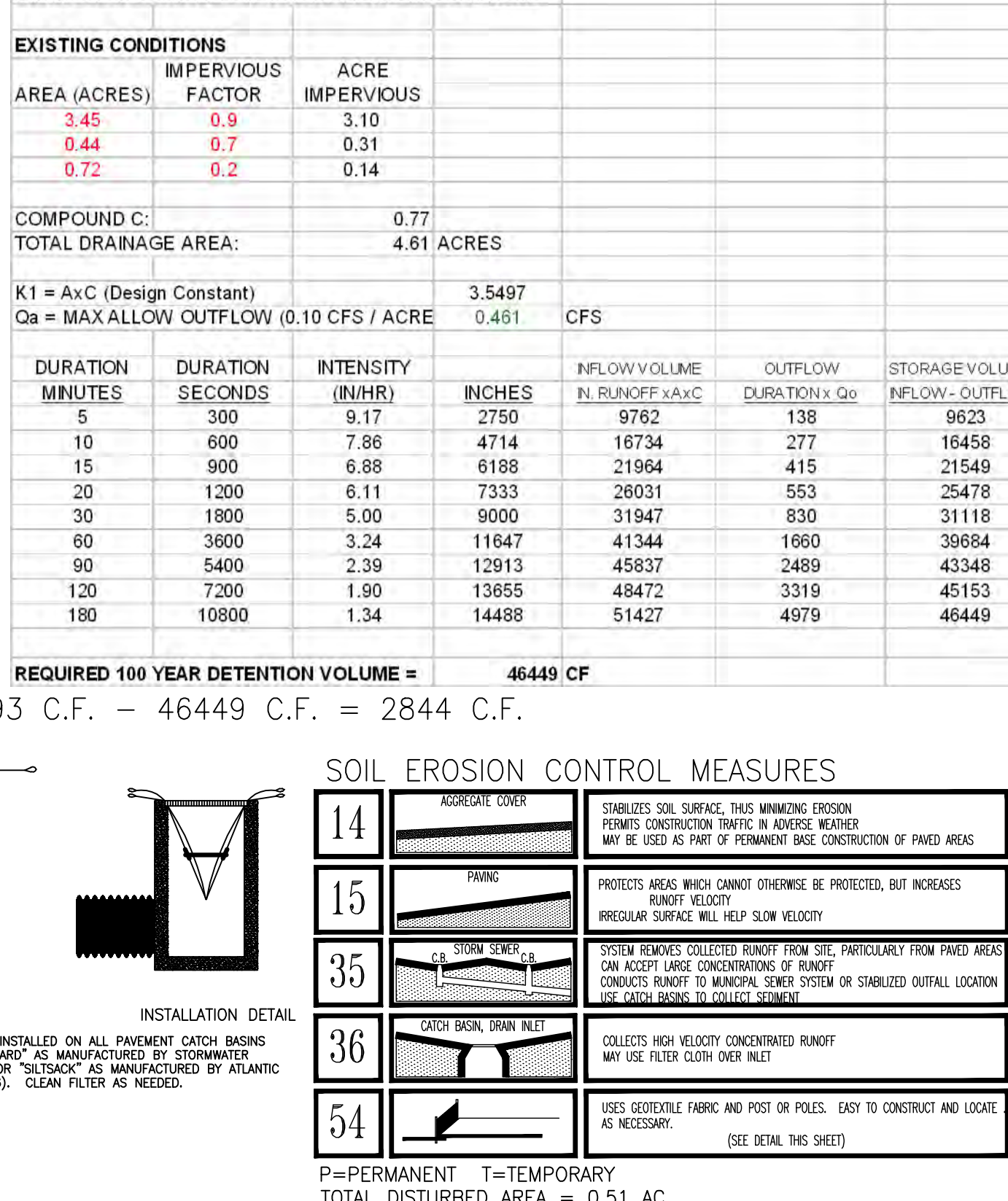
LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS	
EXISTING CONDITIONS	PROPOSED CONDITIONS
AREA (ACRES)	IMPERVIOUS FACTOR
3.45	0.9
0.44	0.7
0.72	0.2

REQUIRED 100 YEAR DETENTION VOLUME = 49293 CF

SOIL EROSION CONTROL MEASURES

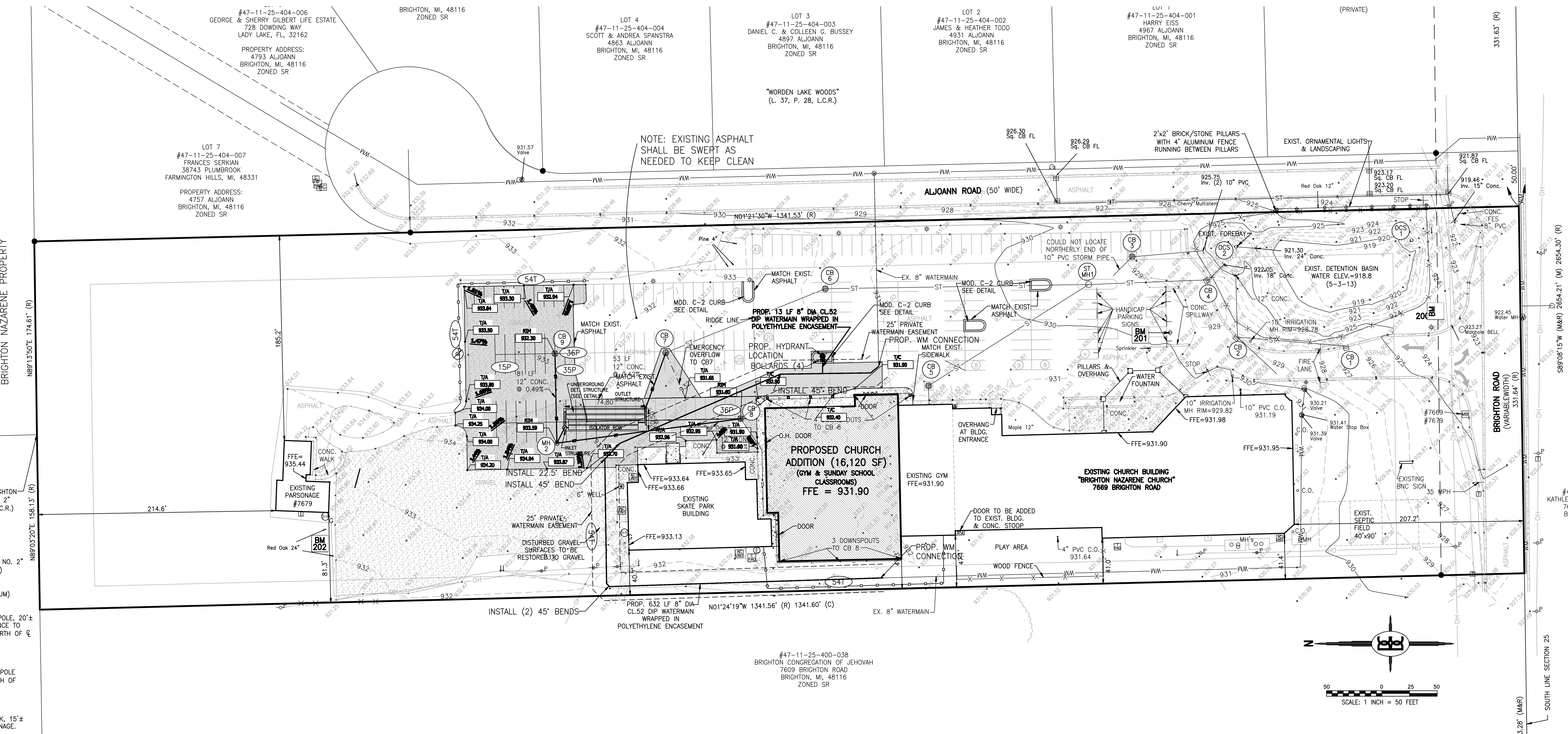


TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT



STORM SEWER INVENTORY

- OUTLET CONTROL STRUCTURE #1 (OCS 1)
RM = 924.11
INV. = 919.04 (24" Conc.)
- OUTLET CONTROL STRUCTURE #2 (OCS 2)
RM = 925.21
INV. = 922.98 (24" Conc.)
- STORM CATCH BASIN #1 (CB 1) (SQUARE)
RM = 926.56 (FLOW LINE)
INV. = 922.71 (12" Conc.)
- STORM CATCH BASIN #2 (CB 2) (SQUARE)
RM = 928.82 (FLOW LINE)
INV. = 922.22 (12" Conc.)
INV. E = 922.22 (12" Conc.)
INV. SW = 922.42 (12" PVC)
INV. W = 924.77 (8" PVC)
- STORM CATCH BASIN #3 (CB 3) (ROUND)
RM = 928.80
INV. S = 926.17 (10" PVC)
INV. NW = 926.19 (10" PVC) (COULD NOT LOCATE WESTERLY END)
- STORM CATCH BASIN #4 (CB 4) (SQUARE)
RM = 927.79 (FLOW LINE)
INV. SE = 922.59 (18" Conc.)
INV. N = 922.67 (15" Conc.)
- STORM MANHOLE #1 (MH 1)
RM = 929.14
INV. S = 924.54 (15" Conc.)
INV. N = 924.39 (15" Conc.)
INV. NW = 926.94 (10" PVC)
- STORM CATCH BASIN #5 (CB 5) (ROUND)
RM = 930.41
INV. SE = 928.81 (10" PVC)
INV. W = 928.91 (6" PVC)
- STORM CATCH BASIN #6 (CB 6) (ROUND)
RM = 931.66
INV. S = 926.06 (15" Conc.)
INV. NW = 926.11 (15" Conc.)
- STORM CATCH BASIN #7 (CB 7) (ROUND)
RM = 931.31
INV. SE = 927.31 (15" Conc.)
PROP. INV. NW = 927.35 (12" Conc.)
- PROPOSED STORM SEWER INVENTORY:
STORM CATCH BASIN #8 (CB 8) (ROUND)
RM = 931.80
INV. NW = 928.30 (12" CONC.)
INV. SW = 928.30 (6" PVC)
INV. SE = 929.50 (6" PVC)
- STORM CATCH BASIN #9 (CB 9) (ROUND)
RM = 932.30
INV. W = 928.80 (12" CONC.)
- STORM MANHOLE #2
RM = 933.59
INV. E = 928.40 (12" CONC.)
INV. S = 927.83 (12" CONC.)
INV. SE = 927.83 (12" CONC.)
- INLET STRUCTURE
INV. W = 927.57 (12" CONC.)
INV. S = 925.07 (ISOLATOR ROW)
- OUTLET STRUCTURE
INV. W = 925.07
INV. SE = 925.07 (12" CONC.)



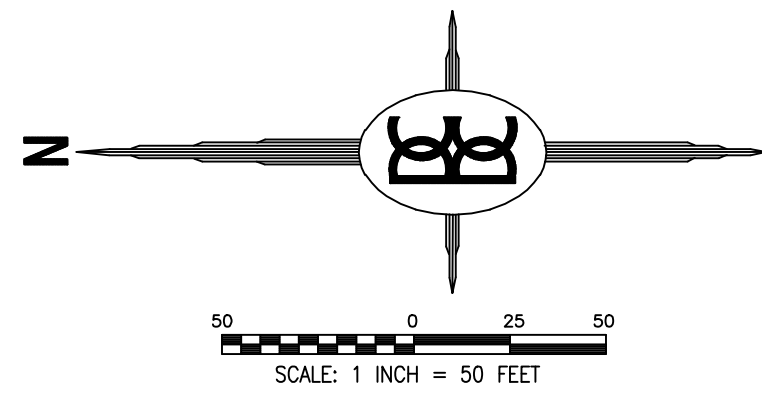
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B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

PROJECT: B.N.C. FACILITY EXPANSION
PREPARED FOR: BRIGHTON NAZARENE CHURCH
DATE: 7/23/13

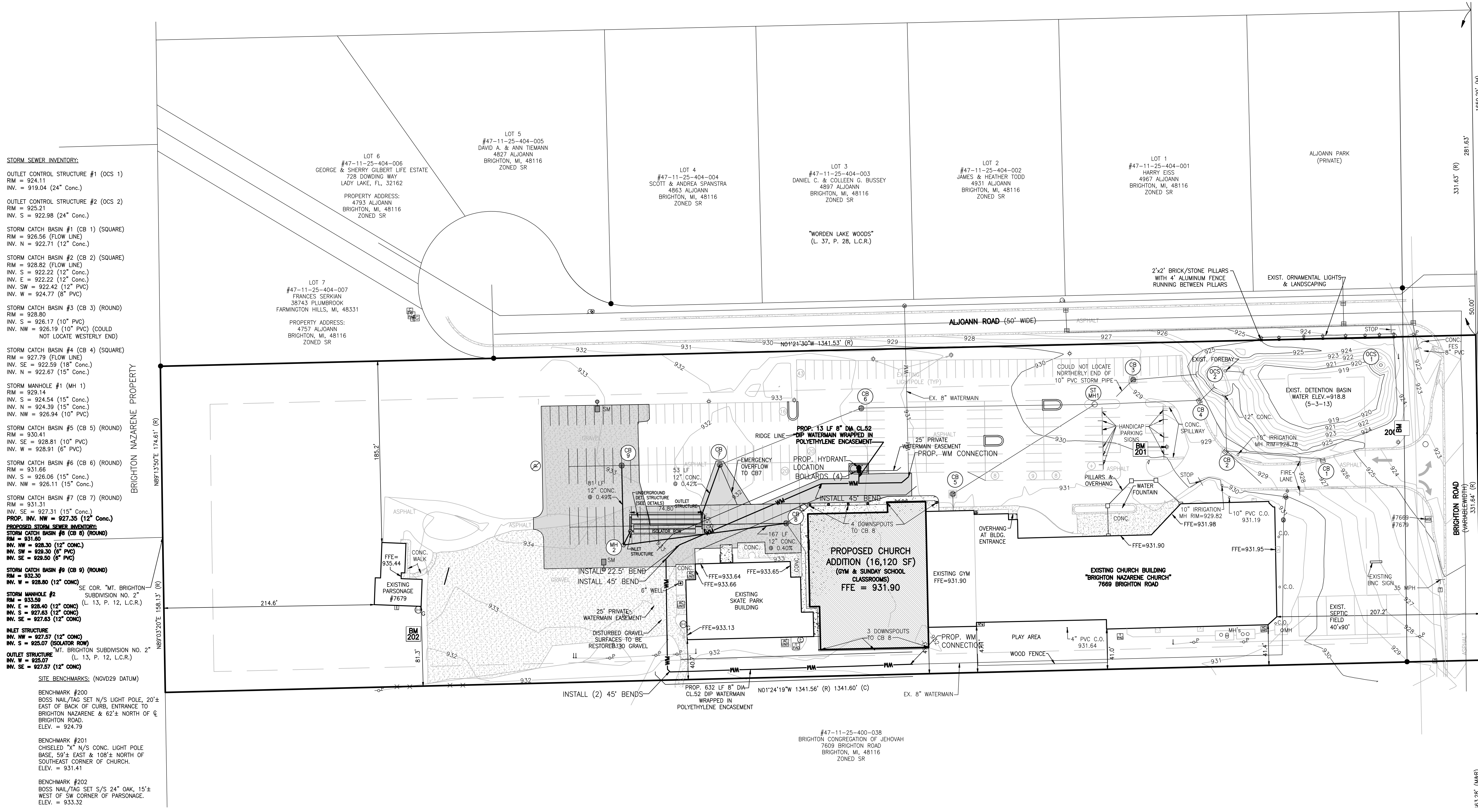
DESIGNED BY: ST
DRAWN BY: AEB
CHECKED BY:

SCALE: 1" = 50'
JOB NO. 13-100
DATE 5-31-13
SHEET NO. 4



LEGEND		LEGEND	
PROPOSED (PR)	EXISTING (EX)	PROPOSED (PR)	EXISTING (EX)

NOTE:
PROPOSED WATERMAIN CONNECTION EAST OF THE PROPOSED CHURCH ADDITION IS TO BE A CUT-IN SLEEVE AND TEE CONNECTION.



STORM SEWER INVENTORY:

OUTLET CONTROL STRUCTURE #1 (OCS 1)
RIM = 924.11
INV. = 919.04 (24\"/>

OUTLET CONTROL STRUCTURE #2 (OCS 2)
RIM = 925.21
INV. S = 922.98 (24\"/>

STORM CATCH BASIN #1 (CB 1) (SQUARE)
RIM = 926.56 (FLOW LINE)
INV. N = 922.71 (12\"/>

STORM CATCH BASIN #2 (CB 2) (SQUARE)
RIM = 928.82 (FLOW LINE)
INV. S = 922.22 (12\"/>

STORM CATCH BASIN #3 (CB 3) (ROUND)
RIM = 928.80
INV. S = 926.17 (10\"/>

STORM CATCH BASIN #4 (CB 4) (SQUARE)
RIM = 927.79 (FLOW LINE)
INV. SE = 922.59 (18\"/>

STORM MANHOLE #1 (MH 1)
RIM = 929.14
INV. S = 924.54 (15\"/>

STORM CATCH BASIN #5 (CB 5) (ROUND)
RIM = 930.41
INV. SE = 928.81 (10\"/>

STORM CATCH BASIN #6 (CB 6) (ROUND)
RIM = 931.66
INV. S = 928.06 (15\"/>

STORM CATCH BASIN #7 (CB 7) (ROUND)
RIM = 931.31
INV. SE = 927.31 (15\"/>

PROPOSED STORM SEWER INVENTORY:

STORM CATCH BASIN #8 (CB 8) (ROUND)
RIM = 931.60
INV. NW = 928.30 (12\"/>

STORM CATCH BASIN #9 (CB 9) (ROUND)
RIM = 932.30
INV. W = 928.80 (12\"/>

STORM MANHOLE #2
RIM = 933.59
INV. E = 928.40 (12\"/>

INLET STRUCTURE
INV. NW = 927.57 (12\"/>

OUTLET STRUCTURE
INV. W = 925.07 (12\"/>

BRIGHTON NAZARENE PROPERTY

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ENGINEERS, SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS

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HOWELL, MI 48843
(800) 246-6735 FAX (517) 948-1870

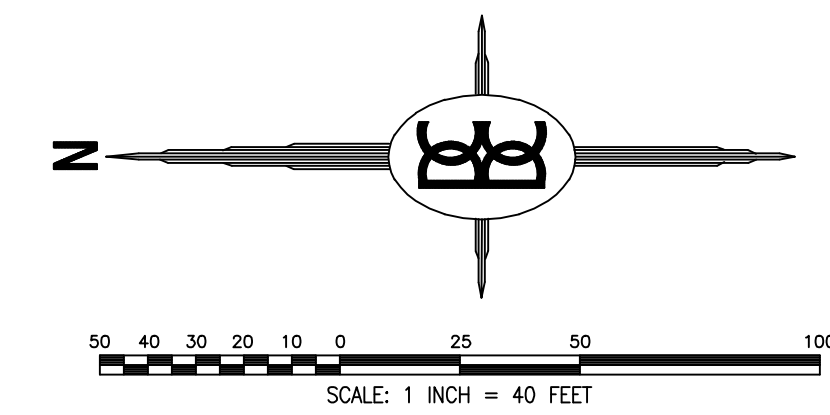
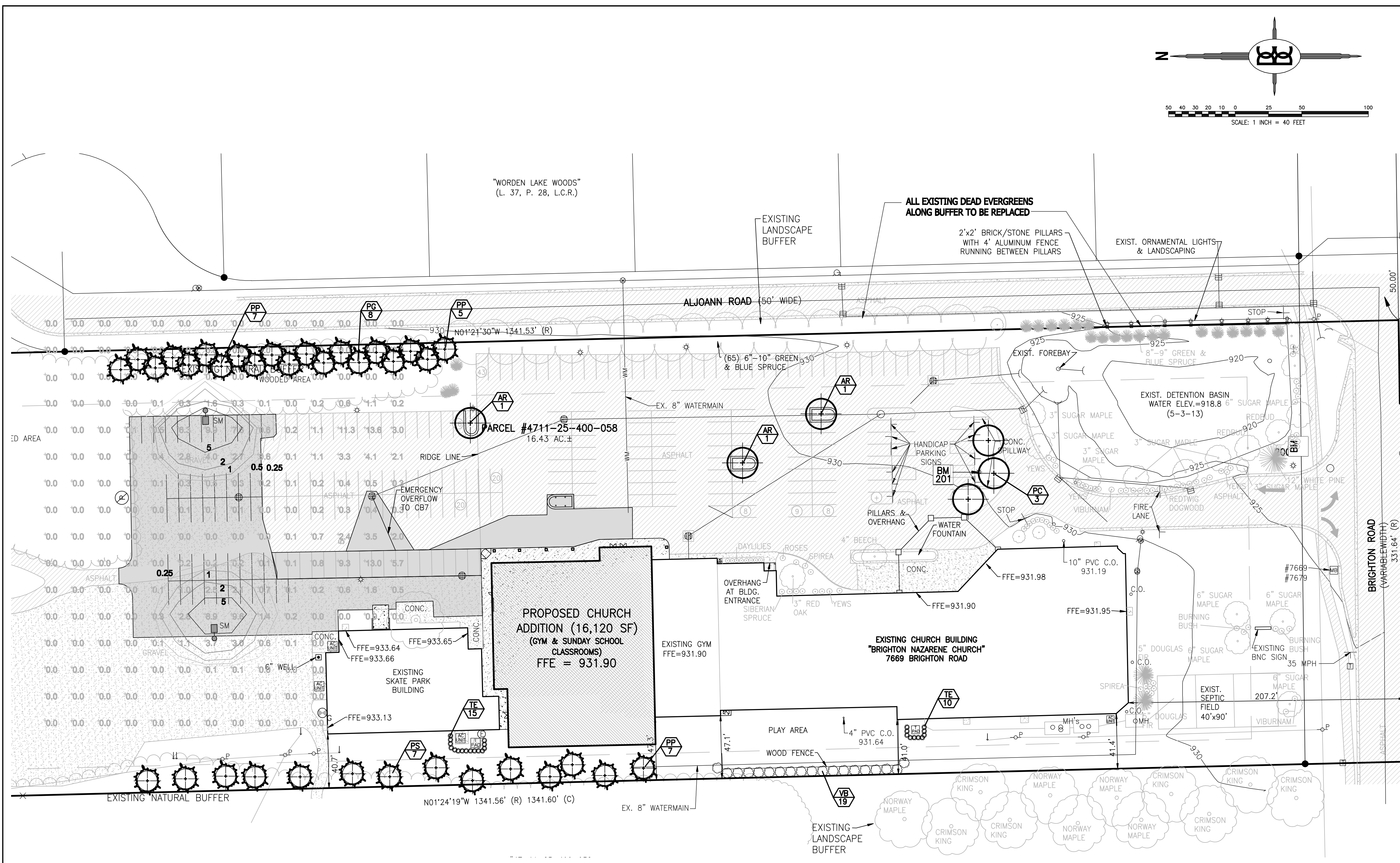
B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH

UTILITY & DRAINAGE PLAN

NO.	DATE	REVISION PER	TWP.	PLANNING COM.
1	7/2/13			
2	7/30/13			

DESIGNED BY: ST
DRAWN BY: AEB
CHECKED BY:

SCALE: 1" = 50'
JOB NO. 13-100
DATE: 5-31-13
SHEET NO. 5



LEGEND

PROPOSED (PR)	EXISTING (EX)	
900	900	CONTOUR
T/C	T/C	STORM DRAINAGE FLOW
XXX.XX	+ 922.08	SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FC	FC	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARWARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
M	M	MANHOLE
I	I	INLET / CATCHBASIN
F	F	FLARED END-SECTION
G	G	GATE VALVE
H	H	HYDRANT
U	U	UTILITY POLE
F	F	FENCE
S	S	SIGN
C	C	CONCRETE
A	A	ASPHALT
D	D	DOUBLE FIXTURE LIGHT POLE
S	S	SINGLE FIXTURE LIGHT FIXTURE
W	W	WALL MOUNTED LIGHT FIXTURE
G	G	GROUND LIGHT FIXTURE
F	F	FOOT CANDLES ON SITE
F	F	FOOT CANDLES OFF SITE
C	C	FOOT CANDLES CONTOURS

SITE LIGHTING SUMMARY
LIGHTING LEVELS ARE SHOWN IN FOOTCANDLES AT 5' ABOVE GRADE

- GENERAL LIGHTING NOTES**
- THE LIGHTING PATTERN 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.
 - ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2' ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
 - ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS.
 - SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE POLES NEED TO BE SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.

LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
SM	SM	2	McGRAW-EDISON GALLERIA SQUARE	GSM-AIS-400-MP-277-SL-FG-BZ-F	400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN	GSM-XX-400-MP-XX-SL-FG-ES	40,000	.75	SSS4418SF-BZ	18'	2'	20'

PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
AR	3	Acer rubrum 'Red Sunset'	Red Sunset Maple	2 1/2" cal.	B-B
PC	3	Pyrus calleryana 'Bradford'	Bradford Callery Pear	2 1/2" cal.	B-B
PG	8	Picea glauca	White Spruce	6'-8' ht.	B-B
PP	19	Picea pungens var. 'Glauca'	Colorado Blue Spruce	6'-8' ht.	B-B
PS	7	Pinus strobus	Eastern White Pine	6'-8' ht.	B-B
SHRUBS					
TE	25	Thuja occidentalis 'Emerald'	Emerald Arborvitae	24"-36" ht.	B-B
VB	19	Viburnum x burkwoodii	Burkwood Viburnum	36" ht.	B-B

ALL IES FILES PROVIDED BY MANUFACTURER FOR CALCULATION OF LIGHTING LEVEL.

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ENGINEERS, SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS

3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

LANDSCAPE & LIGHTING PLAN

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 40'
JOB NO. 13-100
DATE: 5-31-13
SHEET NO. 6

THE EXISTING AND PROPOSED UTILITIES SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND CHARACTER OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES.

BEFORE YOU DIG
CALL MISS DIG
1-800-4-A-DIG

**LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE**

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
 - IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- PERMITTING STANDARDS**
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
 - 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
 - ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
 - PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.

- RETENTION PONDS**
- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
 - THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SODDED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
 - DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
 - RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4' CHAIN LINK FENCE, INCLUDING A 12' ACCESS GATE FOR MAINTENANCE. UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
 - ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
 - SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.

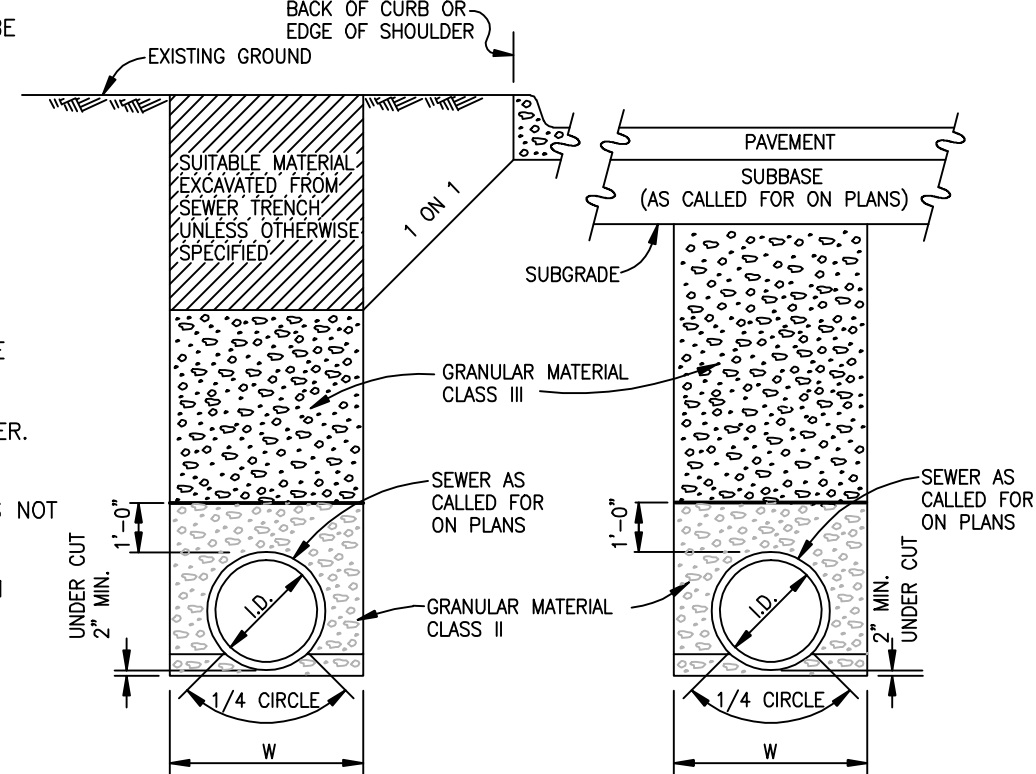
- SLOPES AND DITCHES**
- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES, 3:1.
 - DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 - SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
- STORM DRAINS**
- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.

- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.
- STORM WATER INLETS SHALL HAVE AS A TEMPORARY CONTROL A STRAW BALE BARRIER AND STONE FILTER INSTALLED ALONG THE INLET DURING CONSTRUCTION. AS AN ALTERNATIVE TO THE STRAW BALE BARRIER, A BURLAP AND PEA STONE FILTER MAY BE USED. THREE LAYERS OF BURLAP FIBER AND A FILTER OF PEA STONE MINIMUM 1 FT. IN DEPTH CAN BE USED. DUE TO THE POROSITY OF THE BURLAP FILTER THE MINIMUM OF 1 FT. OF STONE IS VERY IMPORTANT. THE CONTROL SHALL BE INSTALLED AS SOON AS THE STRUCTURE IS BUILT AND INSPECTED DAILY.
- BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
- COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE RAFFLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12"
- ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.

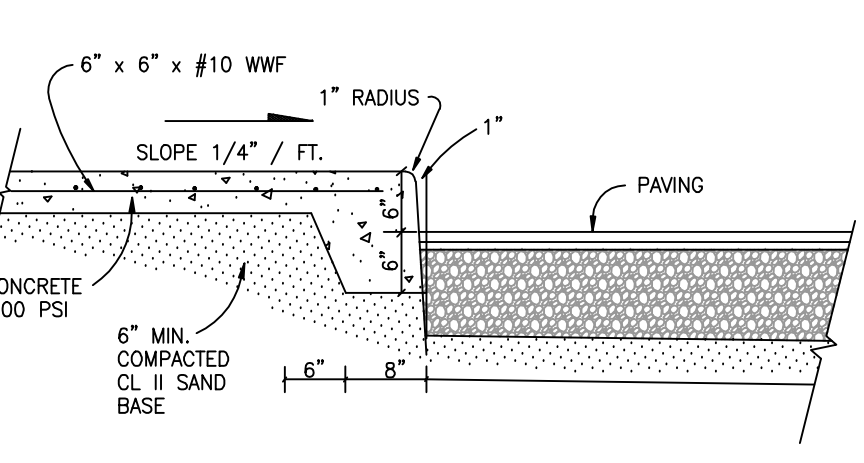
- ALL STORM DRAIN PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
- ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3' SLUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SLUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
- STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEVED FILTER FABRIC WITH A MINIMUM OF 15 SQ. YARDS OF 6" OR LARGER COBBLE STONE.
- 6" RIP RAP SHALL BE NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
- 6" RIP RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE CEMENT SLURRY.
- STORM WATER OUTLET IS IN NEED OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
- IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.

- STABILIZATION**
- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BIND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
 - IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
 - PERMIT FEES DURING THE WINTER PERIOD OF NON-CONSTRUCTION, (DECEMBER 1 THROUGH MARCH 31), SHALL NOT BE IMPOSED IF THE PERMIT HOLDER TEMPORARILY STABILIZES THE EXPOSED AREAS WITH STRAW MATTING, AND OTHER APPROVED CONTROLS, AND OBTAINS A WINTER STABILIZATION CERTIFICATE FROM THIS OFFICE.
 - PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
 - THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE WAIVERS AND OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
 - THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.
 - PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:
TOP-SOIL 3" IN DEPTH
GRASS SEED 218 LBS. PER ACRE
FERTILIZER 150 LBS. PER ACRE
STRAW MULCH 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
 - HYDRO-SEEDING HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1% IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.

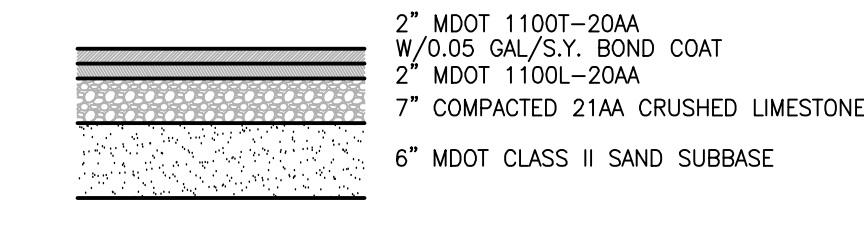
- MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS**
- SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH MAJOR STORM EVENT. MAINTENANCE SHALL INCLUDE REMOVAL OF ACCUMULATED SILT AND REPLACEMENT OF TORN SECTIONS. SILT FENCE SHALL BE REMOVED WHEN ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
 - TRACKING PAD SHALL BE INSPECTED MONTHLY FOR ACCUMULATED DIRT. TRACKING PAD SHALL BE REPLACED WHEN THE STONES ARE CHOKED WITH DIRT. TRACKING PAD SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FIRST COURSE OF ASPHALT BEING LAID.
 - DETENTION/PREVENTION POND SHALL BE INSPECTED QUARTERLY ON A PERMANENT BASIS. MAINTENANCE SHALL INCLUDE SEDIMENT REMOVAL, EMBANKMENT STABILIZATION AND MAINTAINING THE OUTLET STRUCTURE IN GOOD CONDITION. NO TREES SHALL BE ALLOWED TO GROW ON THE EMBANKMENT.
 - CATCH BASINS SHALL BE INSPECTED ANNUALLY FOR ACCUMULATION OF SEDIMENT. ALL SEDIMENT MUST BE REMOVED AND DISPOSED OF PROPERLY WHEN THE SUMP IS FULL.
 - COMMON AREAS SHALL BE STABILIZED NO LATER THAN 15 DAYS AFTER GRADE WORK, PURSUANT TO RULE 1709 (5).



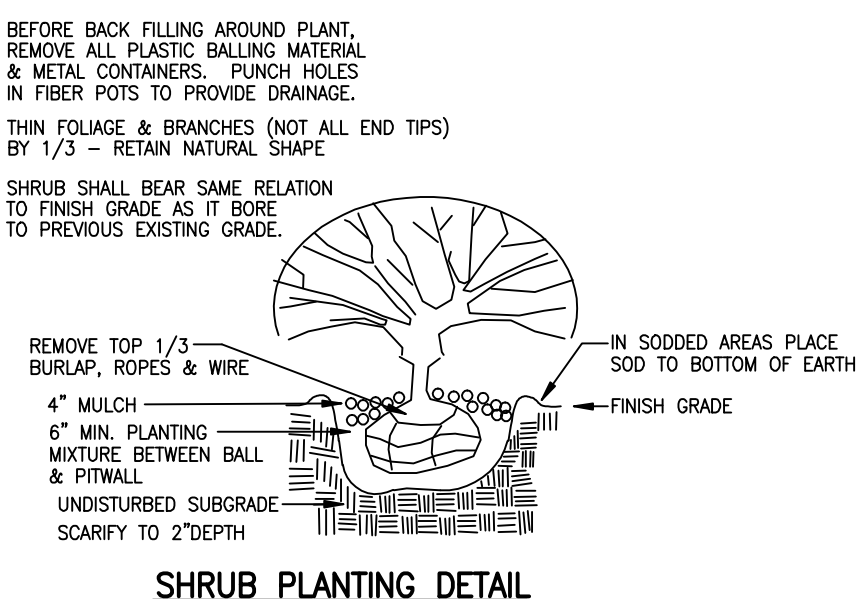
SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED
(REF. M.DOT DETAIL II-83D)
NO SCALE



INTEGRAL CONCRETE WALK / CURB DETAIL
(NO SCALE)

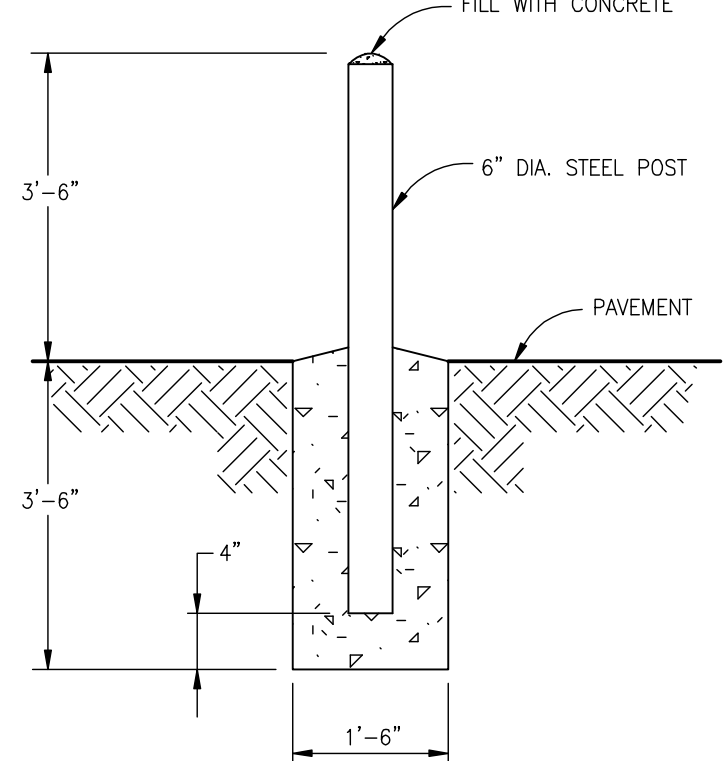


ASPHALT SECTION

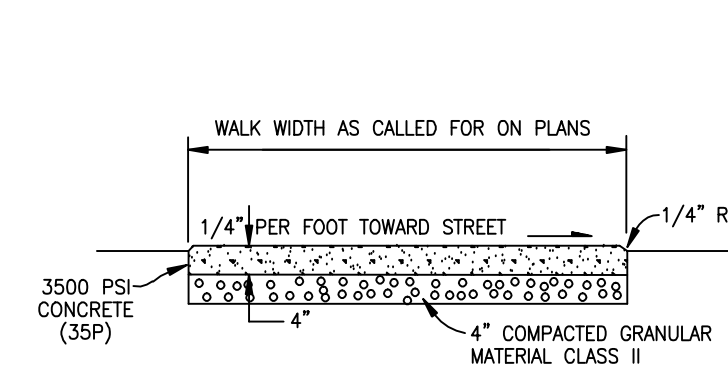


SHRUB PLANTING DETAIL
(NO SCALE)

NO PARKING SIGN DETAIL
(NO SCALE)

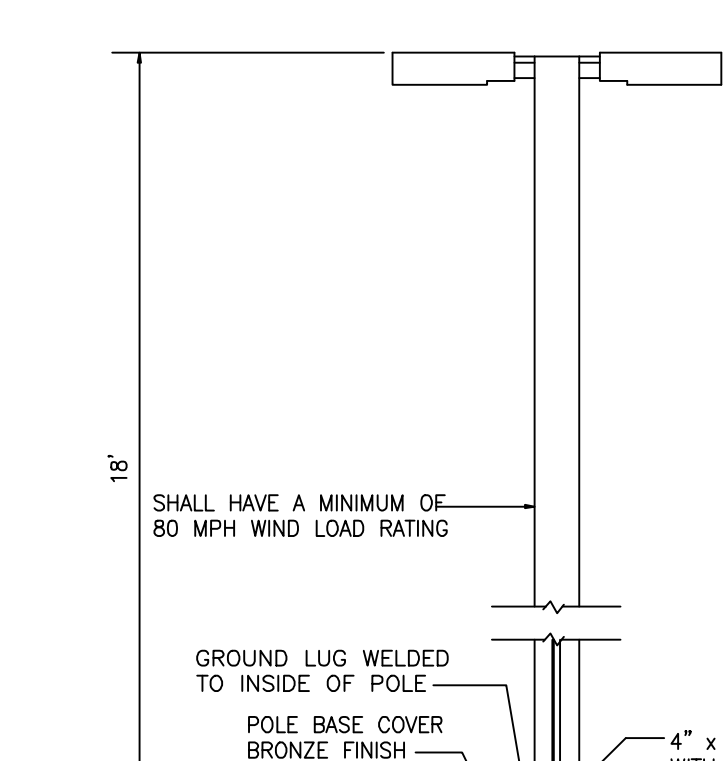


BOLLARD DETAIL
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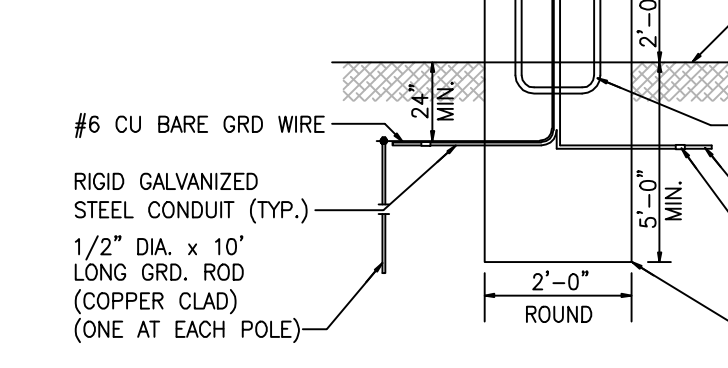


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DECIDUOUS TREE PLANTING DETAIL
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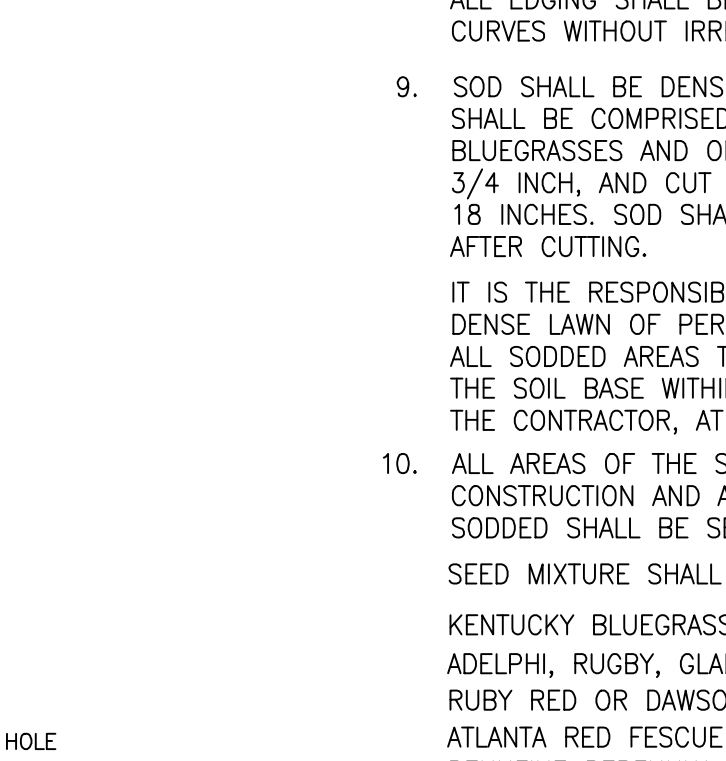


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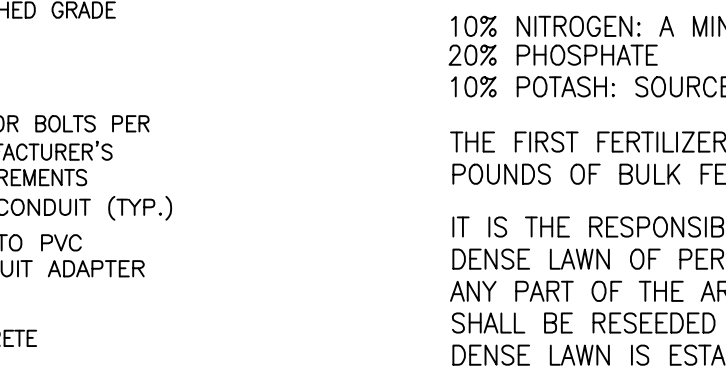


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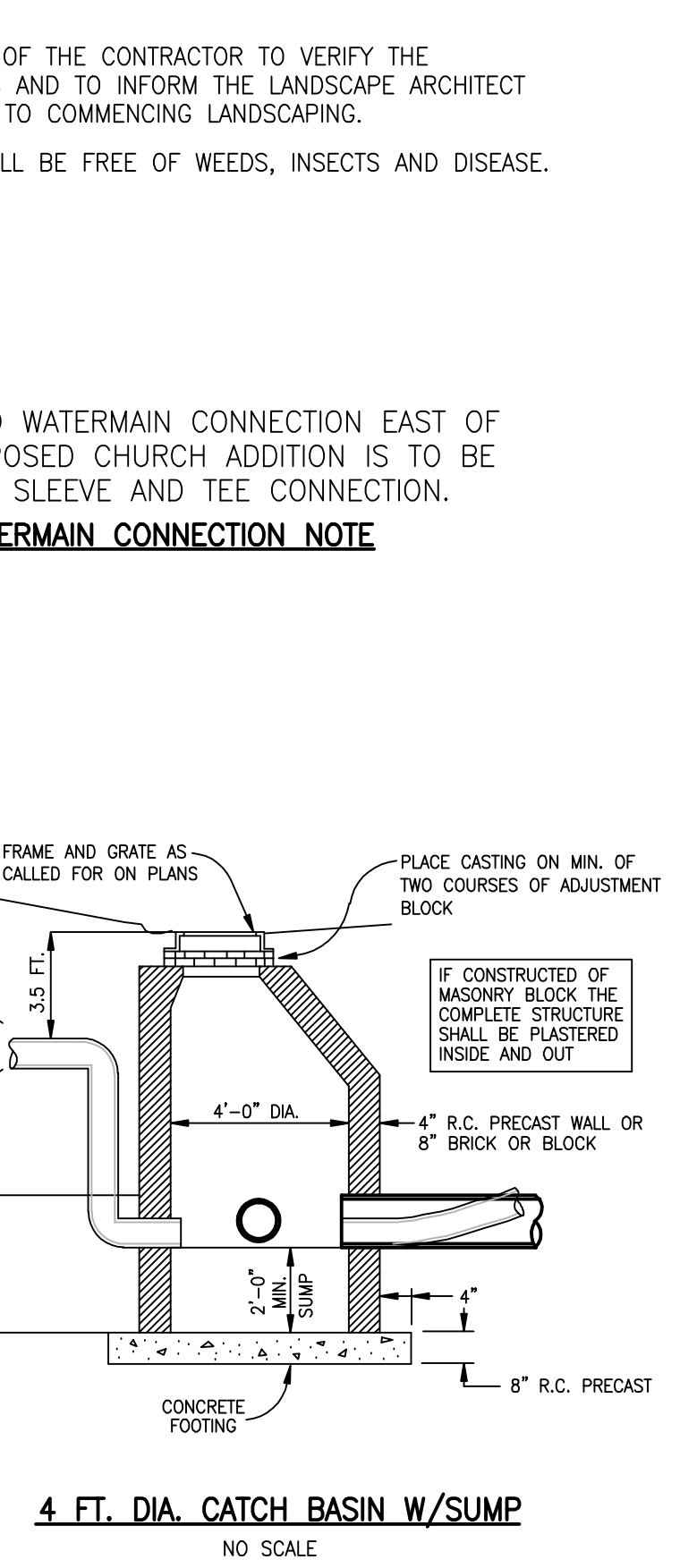
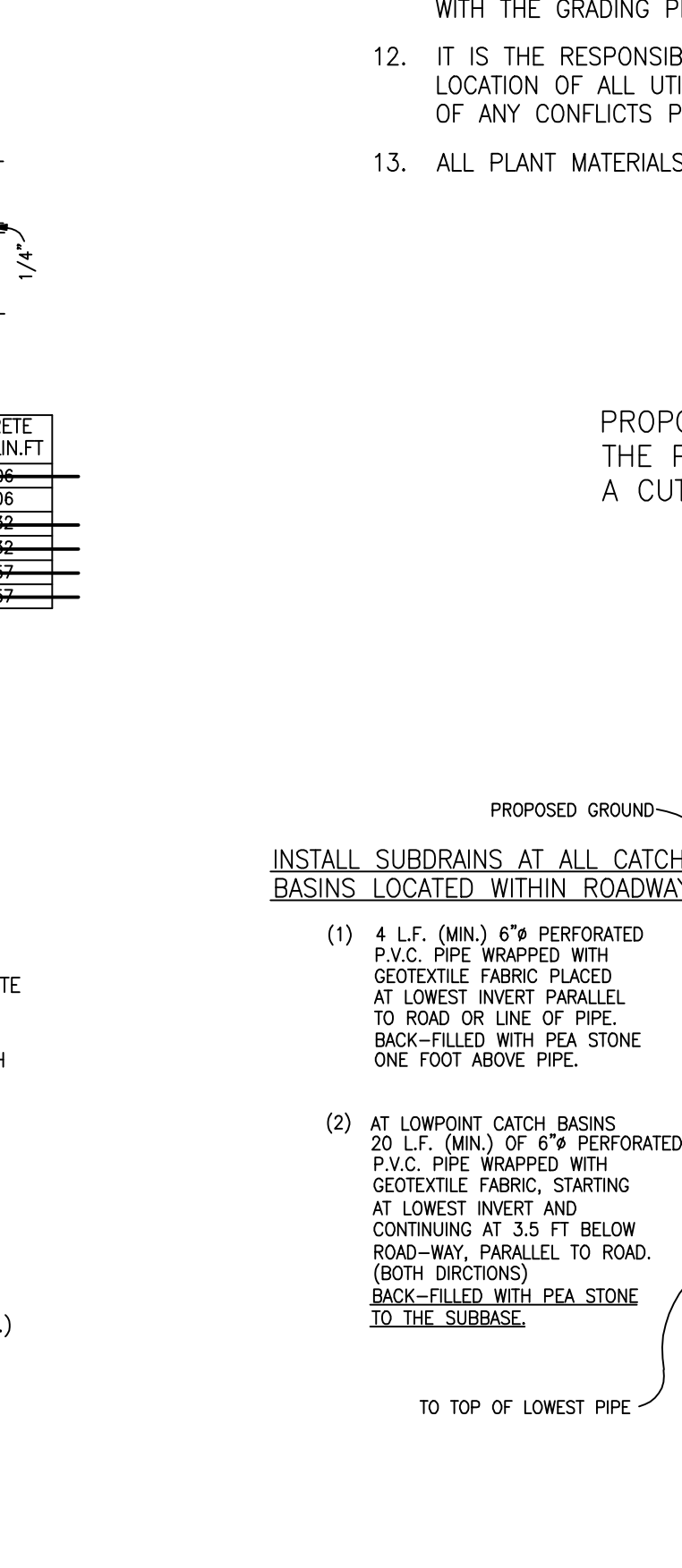
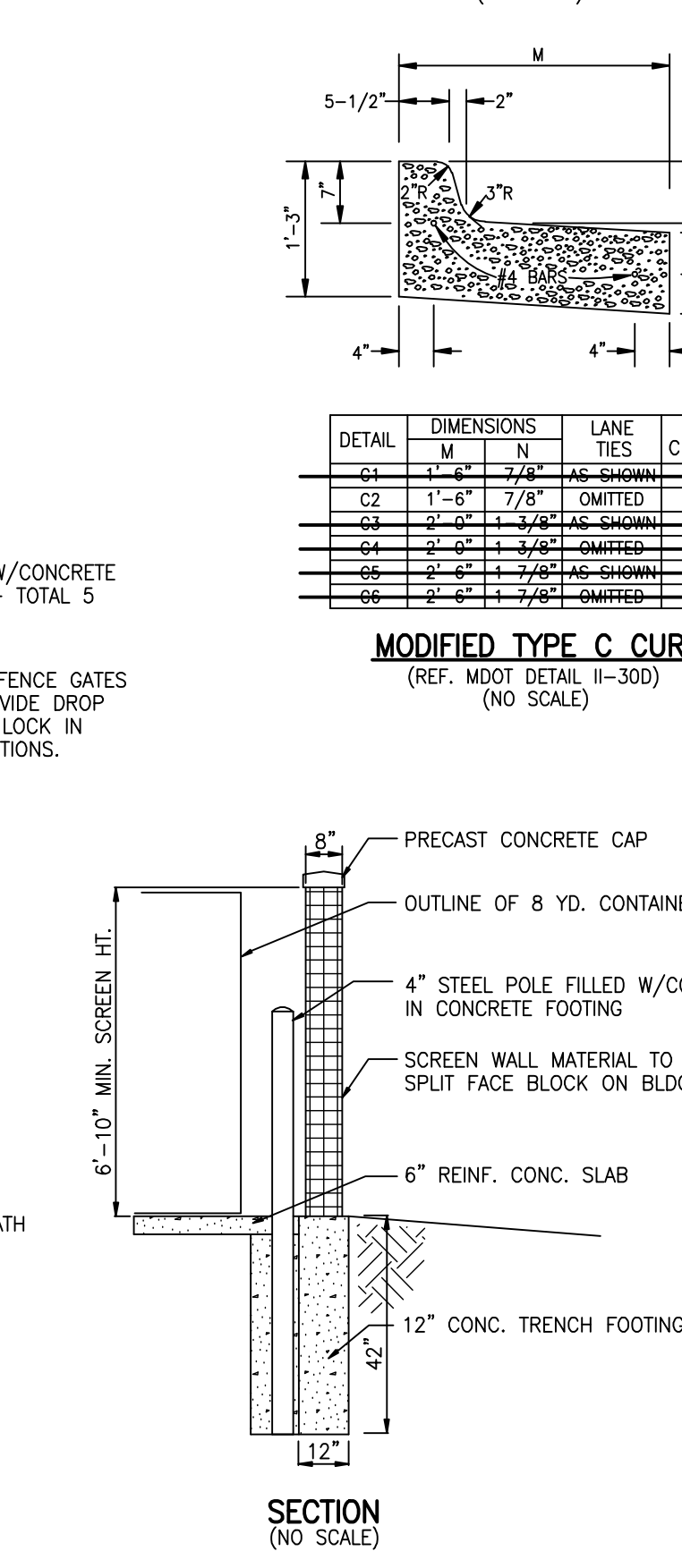
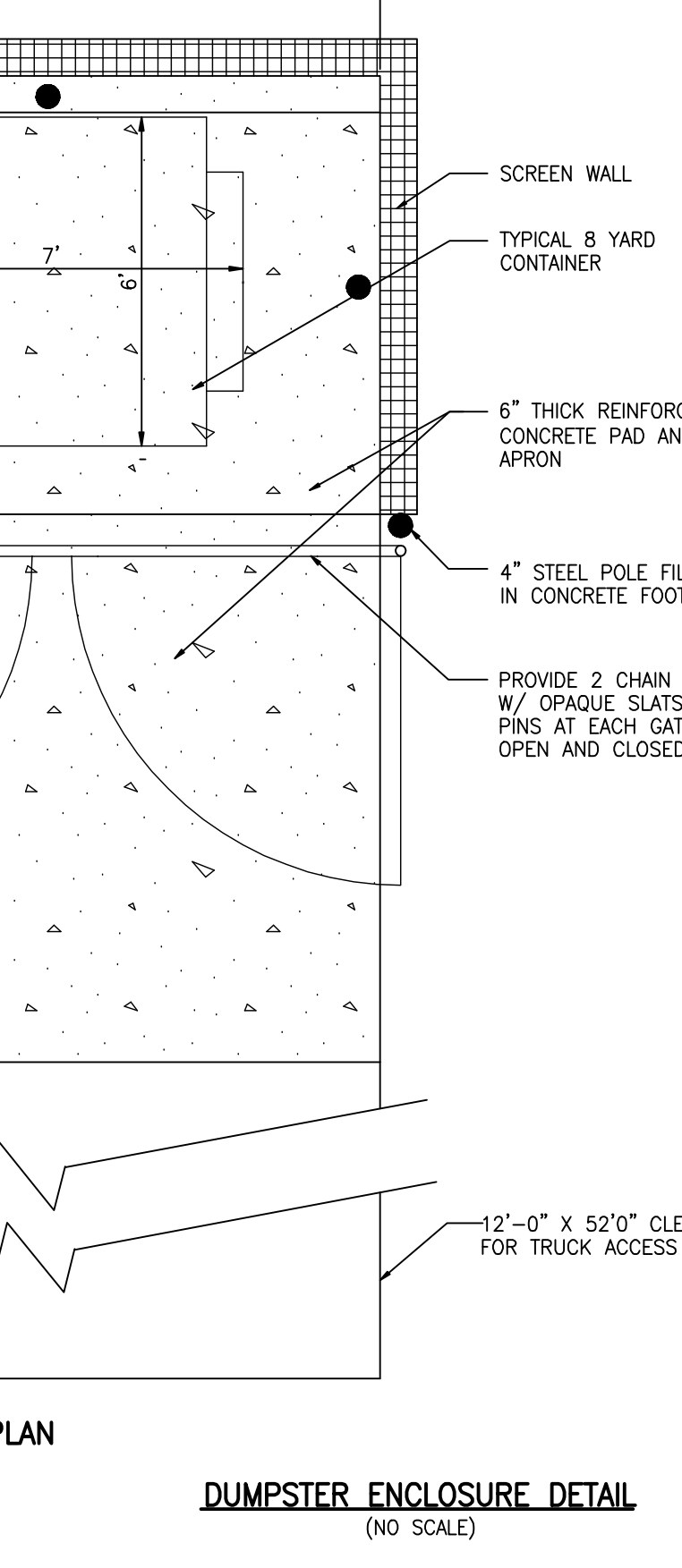
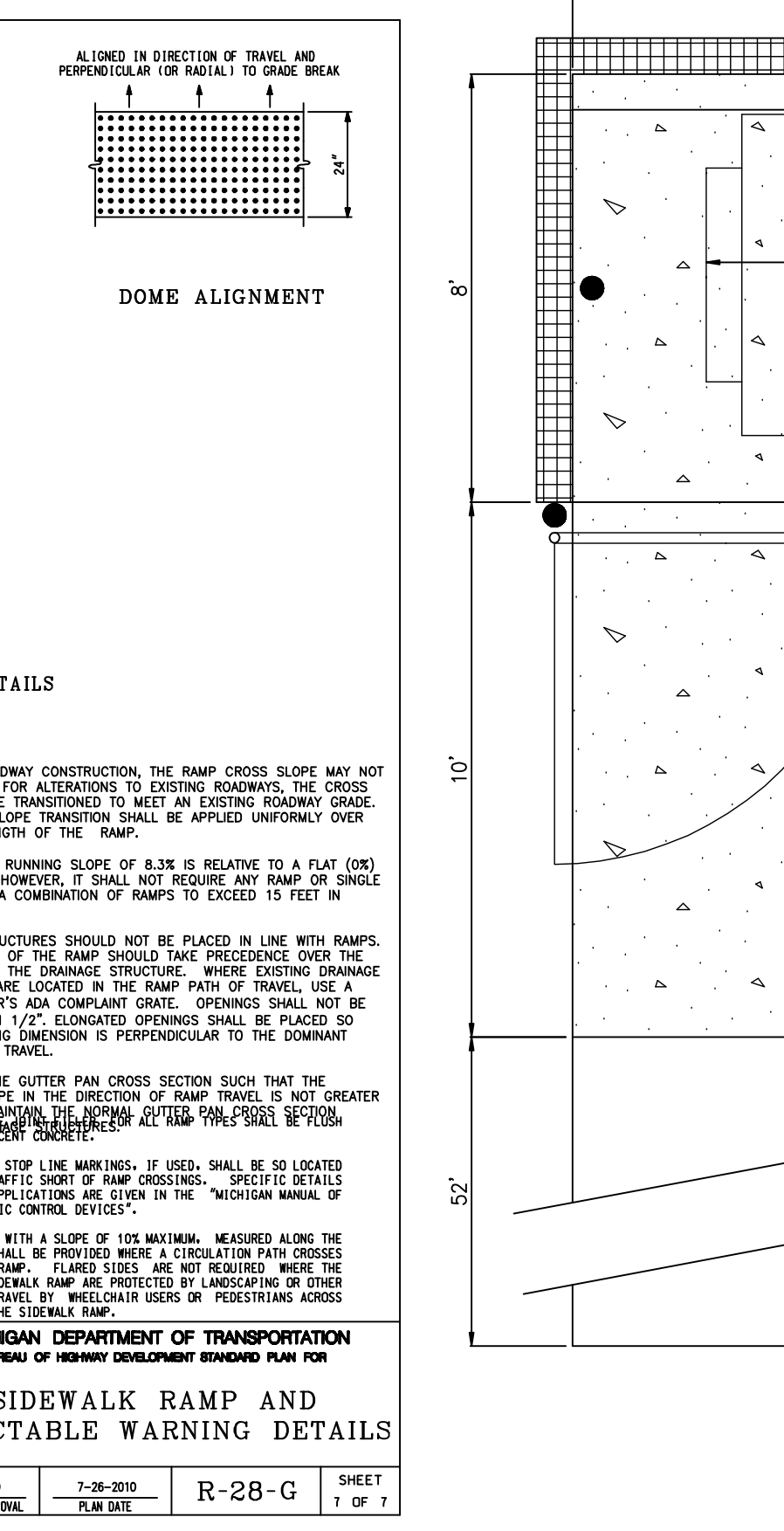
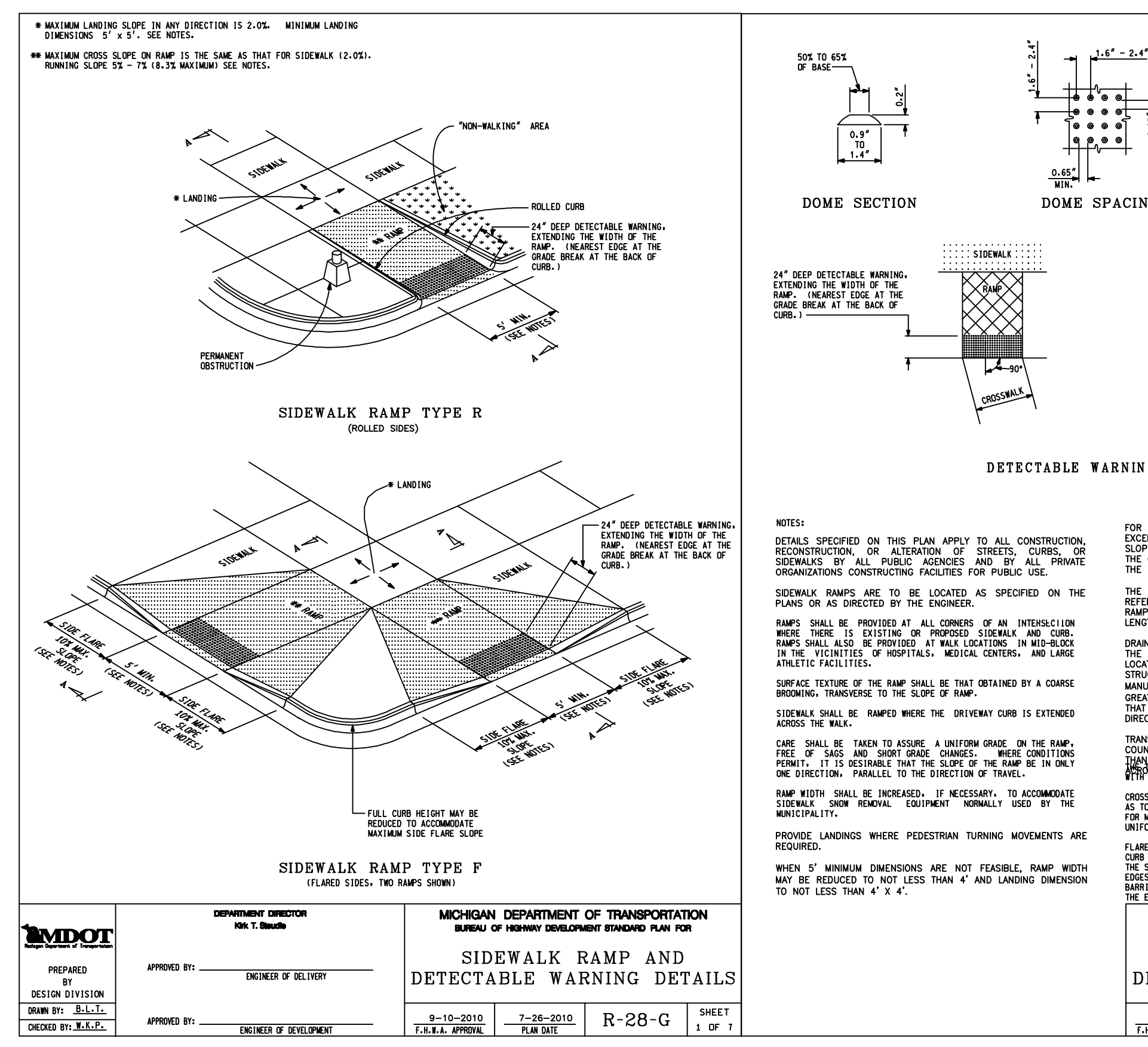
DOUBLE LIGHT FIXTURE DETAIL (TYP.)
(NO SCALE)



BOLLARD DETAIL
(NO SCALE)

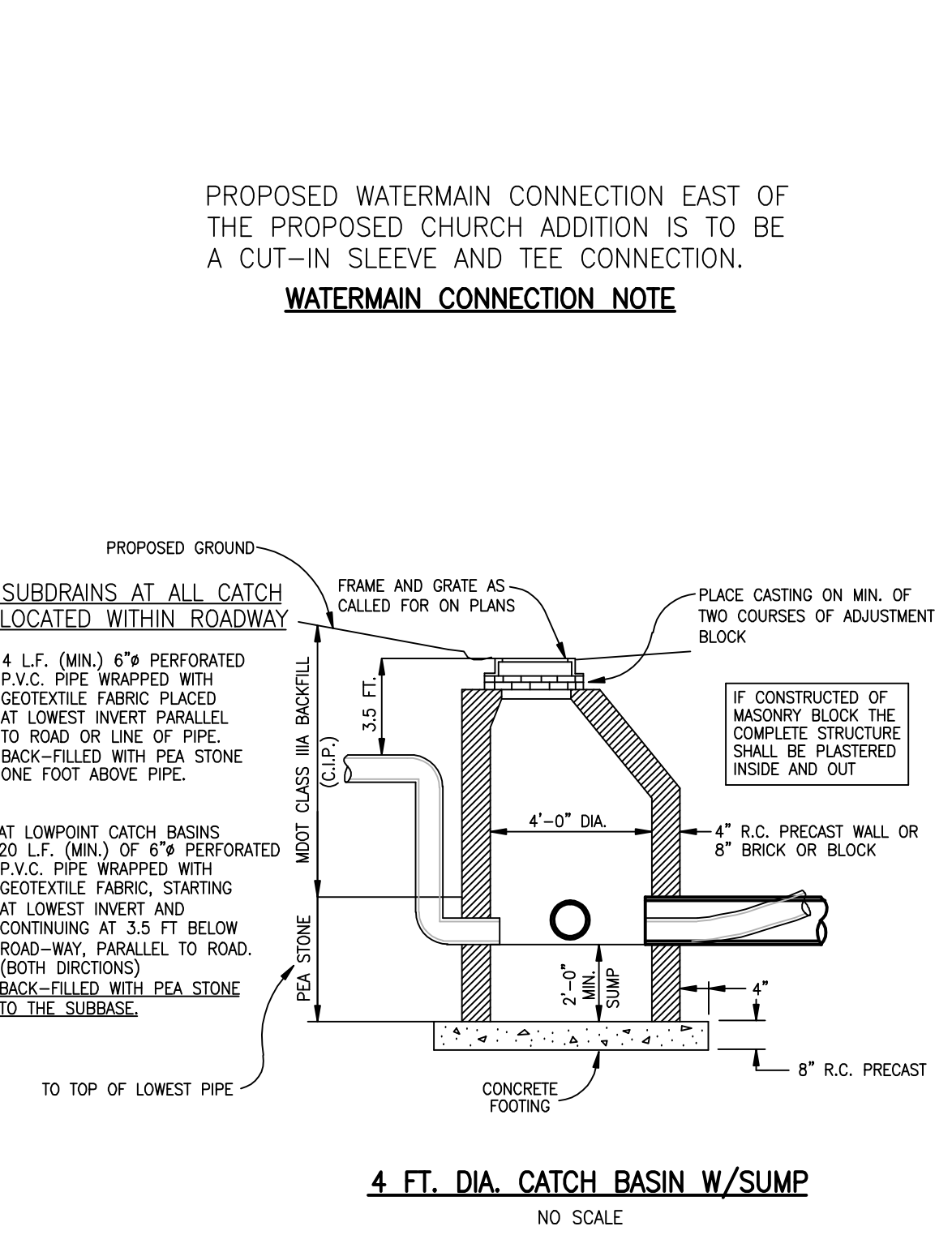


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GENERAL LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY AND SHALL BE NURSERY GROWN. ALL SIZES AND MEASUREMENTS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIAL SHALL BE OF SELECTED SPECIMEN QUALITY AND HAVE A NORMAL HIGHT OF GROWTH. ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED STOCK OR CONTAINER STOCK, NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT AND SECURELY WRAPPED AND BOUND.
- ALL PLANT BEDS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND OTHER EXTRANEOUS OBJECTS AND POOR SOILS TO A MINIMUM DEPTH OF 12 INCHES AND BACKFILLED TO GRADE WITH PLANTING MIX (SEE BELOW).
- PLANTING MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL FROM ON SITE, 1 PART PEAT, AND 5 POUNDS OF SUPERPHOSPHATE PER CUBIC YARD OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED TO A UNIFORM CONSISTENCY.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE MULCHED WITH A 4 INCH LAYER OF SHREDDED BARK MULCH.
- ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL REQUIREMENTS.
- EDGING, WHERE NOTED ON THE PLANS, SHALL BE BLACK ALUMINUM EDGING, 3/16\"/>



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BOSS ENGINEERING
ENGINEERS & SURVEYORS PLANNERS
LANDSCAPE ARCHITECTS

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B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

CONSTRUCTION NOTES & DETAILS

PROJECT: BRIGHTON NAZARENE CHURCH FACILITY EXPANSION
PREPARED FOR: B.N.C. FACILITY EXPANSION
DATE: 7/30/13

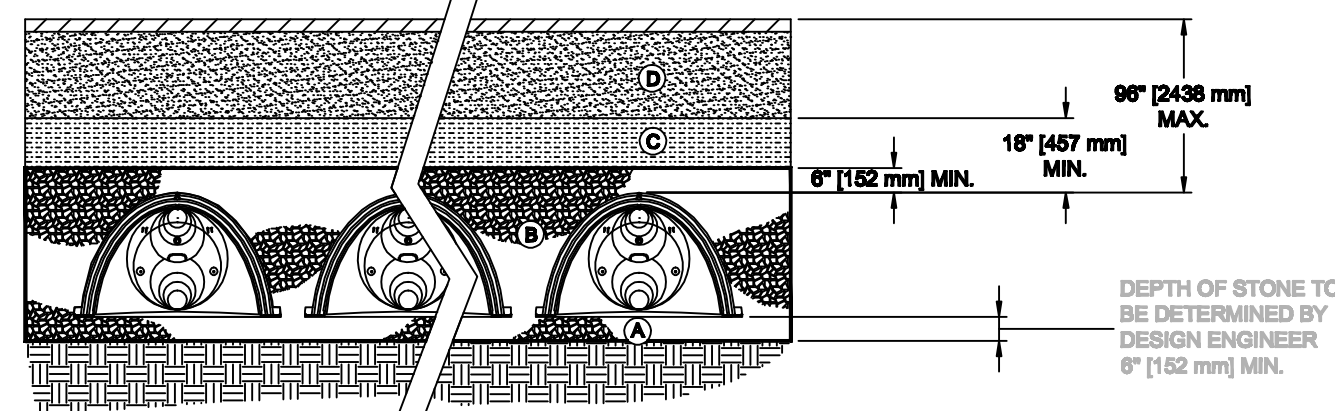
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]

SCALE: AS SHOWN
JOB NO: 13-100
DATE: 5-31-13
SHEET NO: 7

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 AND SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION ⁽¹⁾	COMPACTION/DENSITY REQUIREMENT
D	FILL MATERIAL FOR LAYER D STARTS FROM THE TOP OF THE LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THIS LAYER.	NA	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	FILL MATERIAL FOR LAYER C STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 18" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THIS LAYER.	3, 367, 4, 467, 5, 86, 87, 8, 87, 88, 7, 76, 8, 90, 9, 10	BEGIN COMPACTION AFTER 12" (305 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (152 mm) LIFTS TO A MIN. 98% STANDARD PROCTOR DENSITY ⁽²⁾ . ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LB (5443 K), DYNAMIC FORCE NOT TO EXCEED 20,000 LB (9072 K).
B	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE C LAYER ABOVE.	3, 367, 4, 467, 5, 86, 87	NO COMPACTION REQUIRED.
A	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	3, 36, 4, 467, 5, 86, 87	PLATE COMPACT OR ROLL TO ACHIEVE A 98% STANDARD PROCTOR DENSITY ⁽²⁾ .

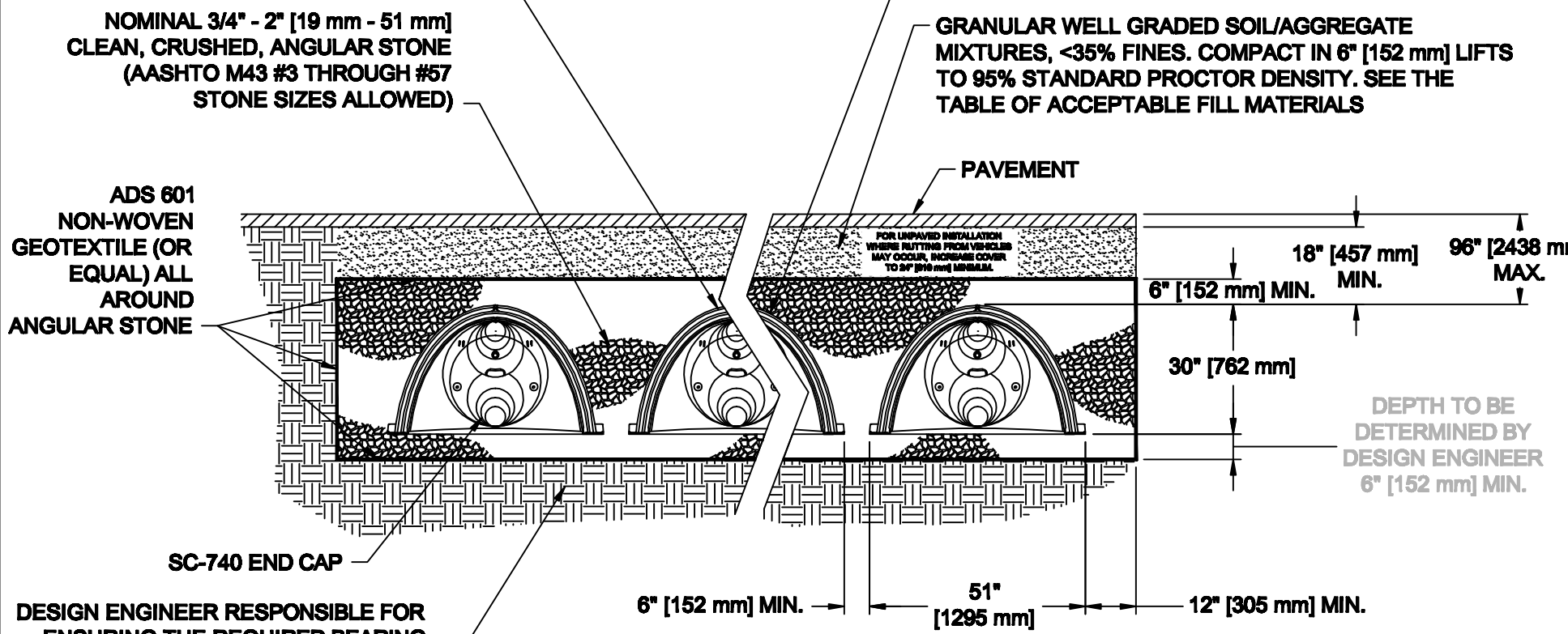
PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: 'CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE'.
 2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (152 mm) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



STORMTECH ACCEPTABLE FILL

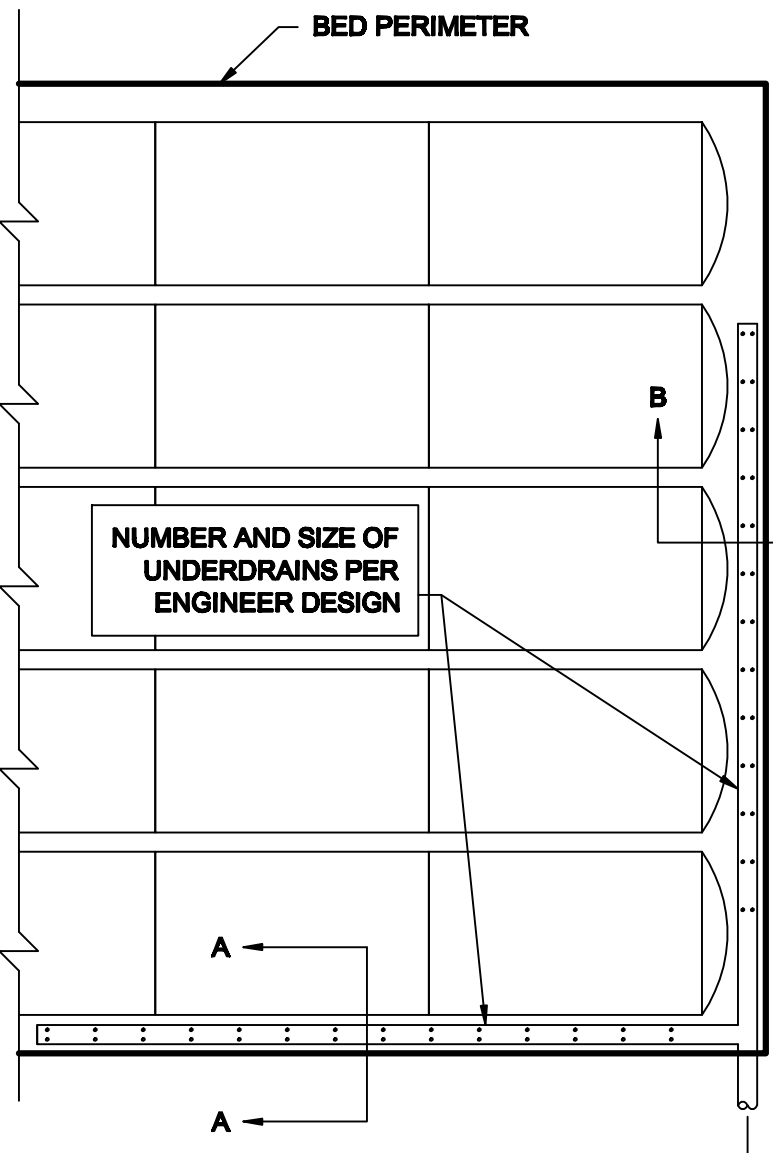
CHAMBERS SHALL MEET ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".

CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".



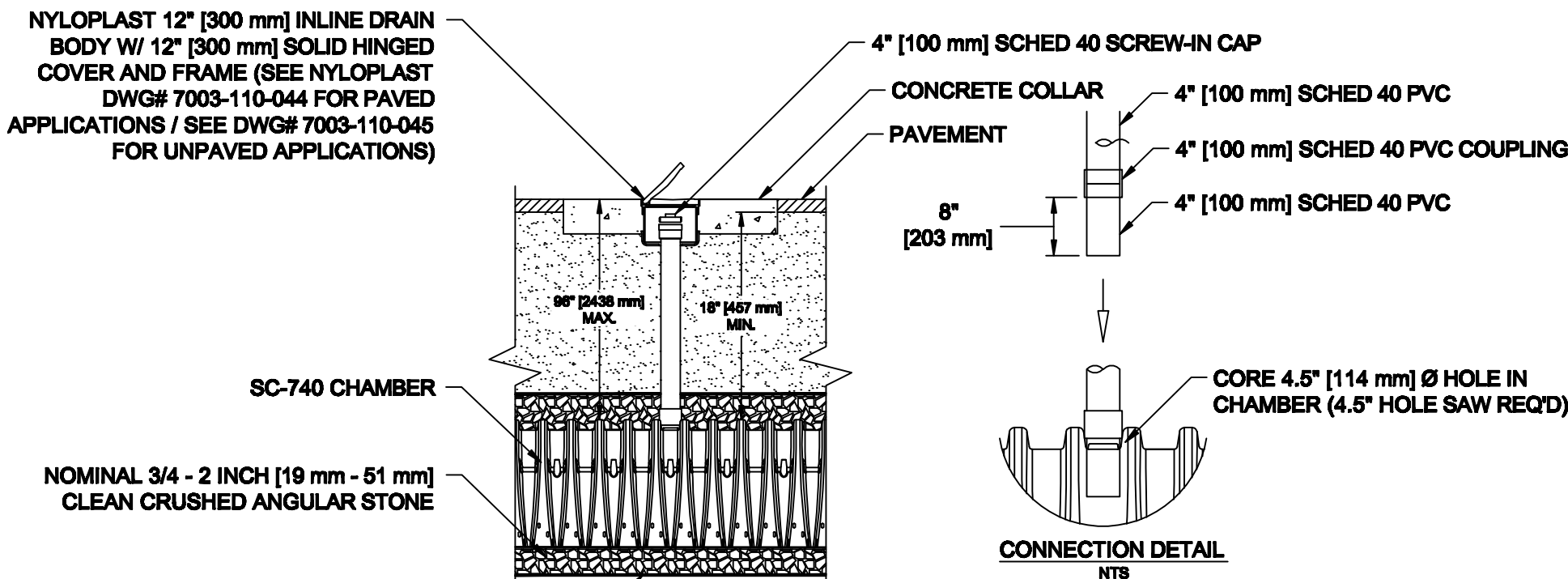
THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.

SC-740 TYPICAL CROSS-SECTION



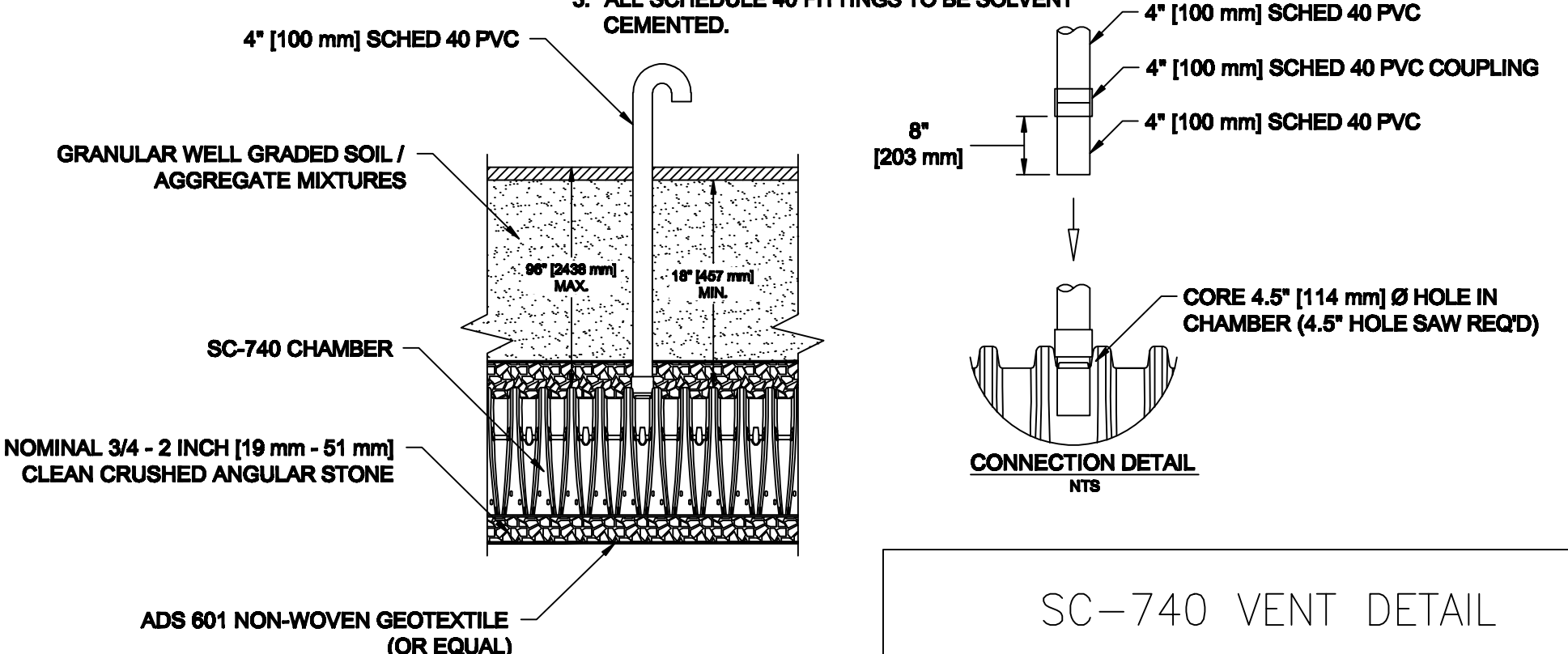
SC-740 UNDERDRAIN

NOTES:
 1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
 2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

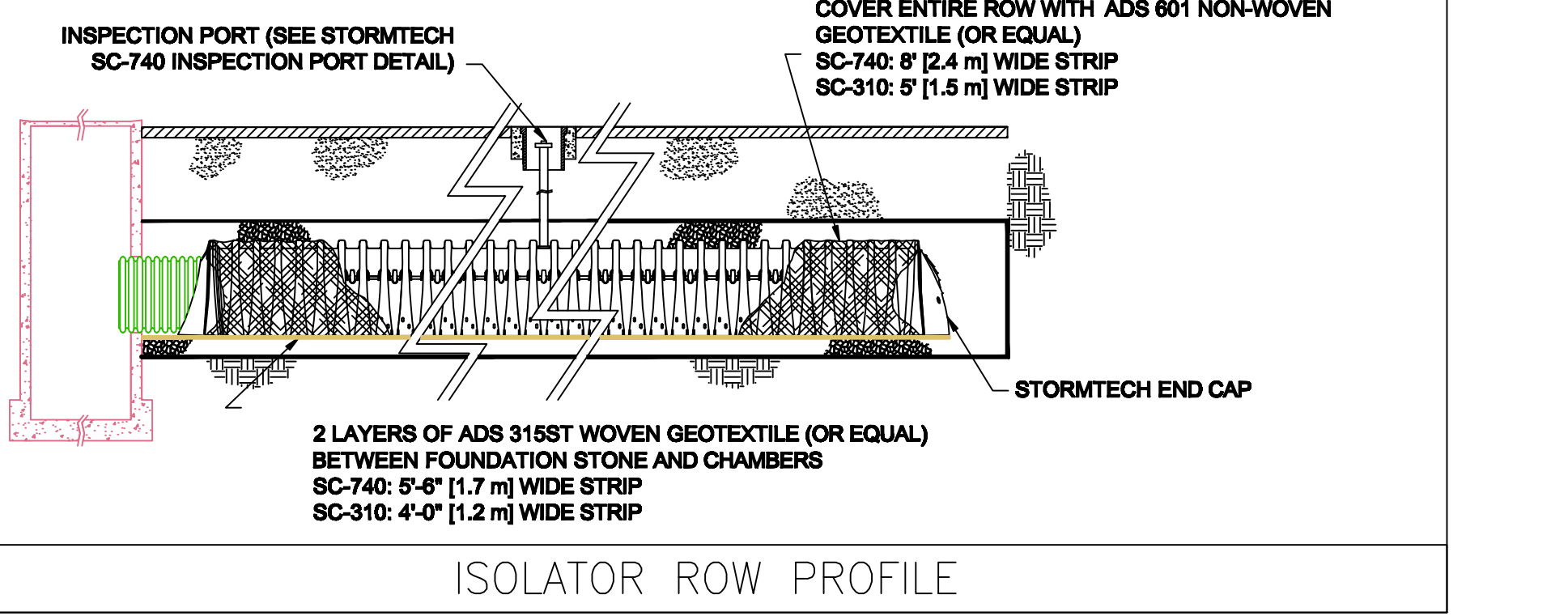


SC-740 INSPECTION PORT DETAIL

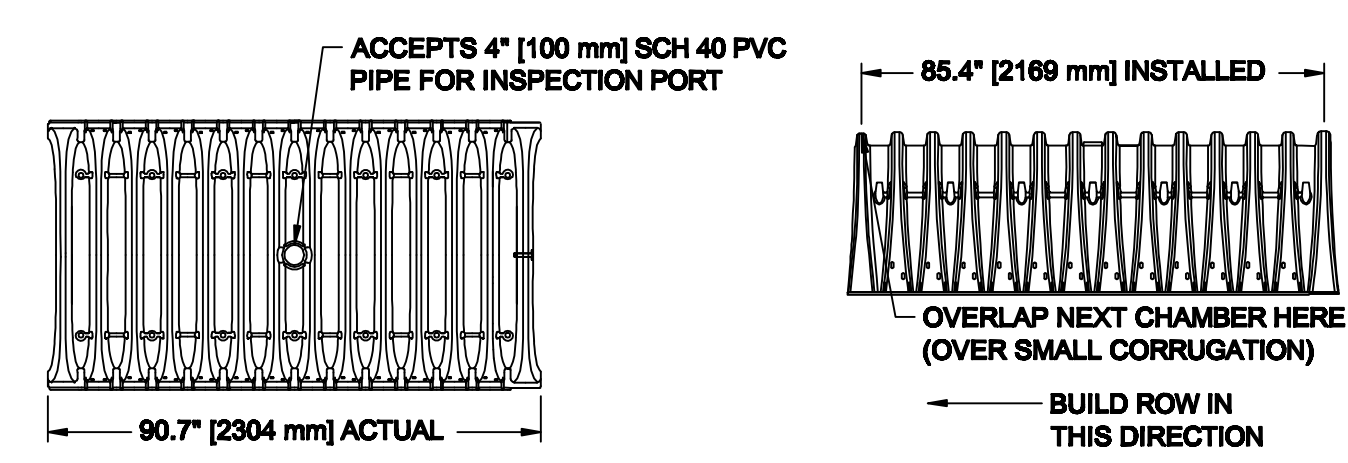
NOTES:
 1. VENT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
 2. VENT MAY ALSO BE CONNECTED AS PERFORATED PIPE THROUGH STONE.
 3. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.



SC-740 VENT DETAIL



ISOLATOR ROW PROFILE



NOMINAL CHAMBER SPECIFICATIONS
 SIZE (W x H x INSTALLED LENGTH)
 CHAMBER STORAGE
 MINIMUM INSTALLED STORAGE WEIGHT

PART#	STUB	A	B	C
SC740EPE06T	6" [150 mm]	10.90" [277 mm]	18.50" [470 mm]	N/A
SC740EPE06B	6" [150 mm]	10.90" [277 mm]	N/A	0.50" [13 mm]
SC740EPE08T	8" [200 mm]	12.20" [310 mm]	16.50" [419 mm]	N/A
SC740EPE08B	8" [200 mm]	12.20" [310 mm]	N/A	0.80" [15 mm]
SC740EPE10T	10" [250 mm]	13.40" [340 mm]	14.50" [368 mm]	N/A
SC740EPE10B	10" [250 mm]	13.40" [340 mm]	N/A	0.70" [18 mm]
SC740EPE12T	12" [300 mm]	14.70" [373 mm]	12.50" [318 mm]	N/A
SC740EPE12B	12" [300 mm]	14.70" [373 mm]	N/A	1.20" [30 mm]
SC740EPE15T	15" [375 mm]	18.40" [467 mm]	9.00" [229 mm]	N/A
SC740EPE15B	15" [375 mm]	18.40" [467 mm]	N/A	1.30" [33 mm]
SC740EPE18T	18" [450 mm]	19.70" [500 mm]	5.00" [127 mm]	N/A
SC740EPE18B	18" [450 mm]	19.70" [500 mm]	N/A	1.80" [41 mm]
SC740EPE24B	24" [600 mm]	18.50" [470 mm]	N/A	0.10" [3 mm]

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
 STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	A	B	C
SC740EPE06T	6" [150 mm]	10.90" [277 mm]	18.50" [470 mm]	N/A
SC740EPE06B	6" [150 mm]	10.90" [277 mm]	N/A	0.50" [13 mm]
SC740EPE08T	8" [200 mm]	12.20" [310 mm]	16.50" [419 mm]	N/A
SC740EPE08B	8" [200 mm]	12.20" [310 mm]	N/A	0.80" [15 mm]
SC740EPE10T	10" [250 mm]	13.40" [340 mm]	14.50" [368 mm]	N/A
SC740EPE10B	10" [250 mm]	13.40" [340 mm]	N/A	0.70" [18 mm]
SC740EPE12T	12" [300 mm]	14.70" [373 mm]	12.50" [318 mm]	N/A
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SC740EPE24B	24" [600 mm]	18.50" [470 mm]	N/A	0.10" [3 mm]

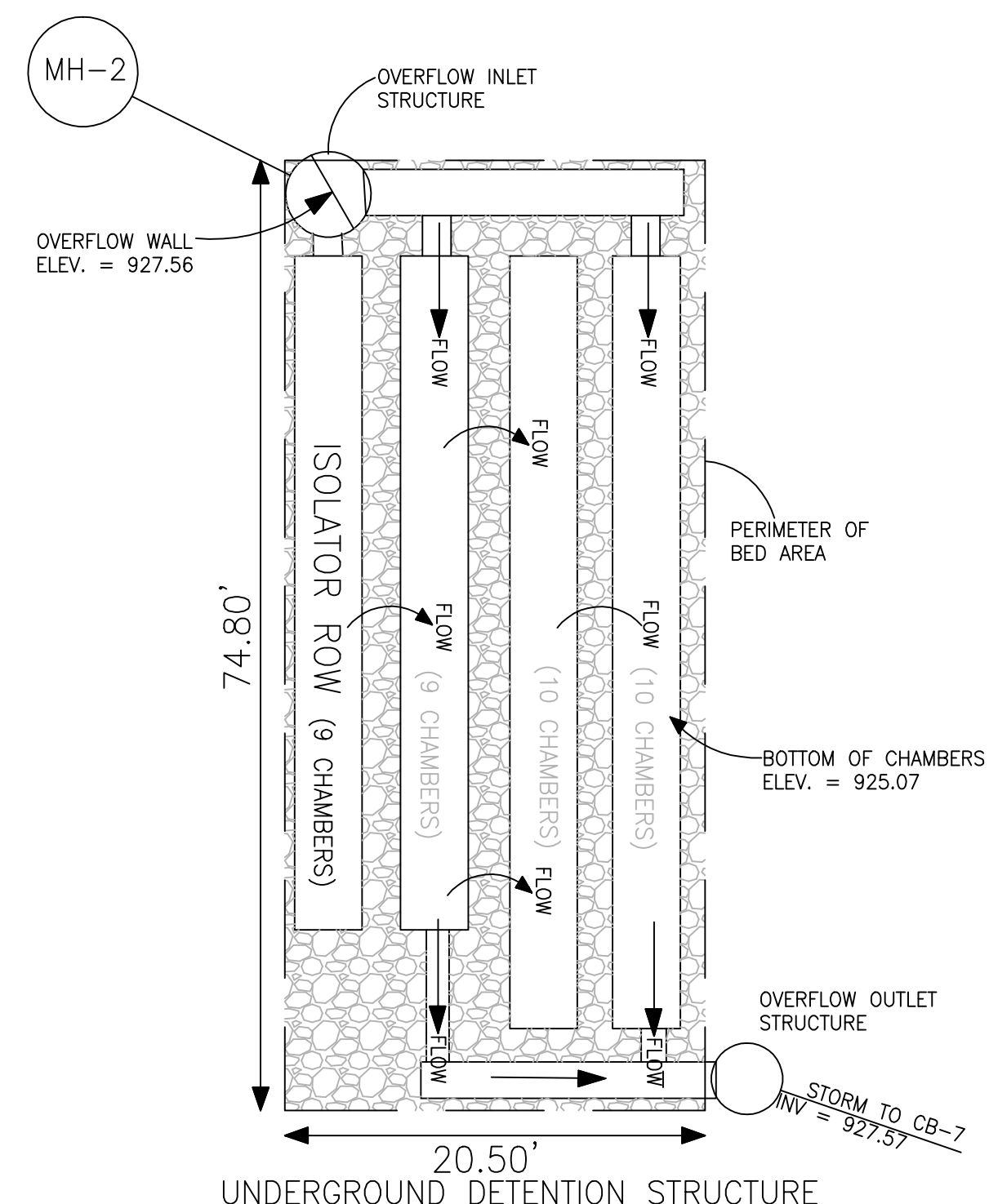
ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-982-2894.
 *FOR THE SC740EPE24B THE 24" [600 mm] STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" [44 mm]. BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.
 NOTE: ALL DIMENSIONS ARE NOMINAL

SC-740 TECHNICAL SPECIFICATIONS

STORMWATER CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740, SC-310 OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS TESTED USING ASTM STANDARDS.
- CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
 - A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2922 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
- ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2922 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
- CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN MANUAL.
- THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

STORMWATER CHAMBER SPECIFICATIONS



UNDERGROUND DETENTION STRUCTURE

StormTech Solutions for Stormwater Management

Project: 13-100
 By: BOSS ENGINEERING
 Point of Contact:
 Date: 5/30/2013

System Requirements	Value	Notes
Required Storage Volume	2,644 CF	
Selected Stormtech Chamber System	SC-740	
Stone Porosity (Industry Standard = 40%)	40%	
Stone Foundation Depth	6 inches	
Storage Volume Per Chamber	74.90 CF	
Avg Cover over Chambers (18 in min. & 96 in max.)	18 inches	
Number of Chambers Required	38 Each	
Required Bed Size	1,466 SF	
Tons of Stone Required	176 Tons	
Volume of Excavation	244 CY	
Area of Filter Fabric	450 SY	
# of End Caps Required	8 Each	
Length of ISOLATOR ROW	71.2 FT	
ISOLATOR FABRIC	40 SY	

Is the limiting dimension for the bed the width or length?		width	Controlled by Length
Width	Controlled by Width (Rows)	26 FT	Length
Length	Controlled by Length	100 FT	

2 of the chambers rows will contain only 8 chambers

BOSS ENGINEERING
 ENGINEERS SURVEYORS & PLANNERS
 LANDSCAPE ARCHITECTS
 (E-MAIL: BOSS@BOSS-ENGINEERING.COM)
 3121 E. GRAND RIVER AVE.
 HOWELL, MI 48843
 (800) 246-6735 FAX (517) 548-1870

B.N.C. FACILITY EXPANSION
 BRIGHTON NAZARENE CHURCH
 7669 BRIGHTON ROAD
 BRIGHTON, MI 48116
 810-227-6600

UNDERGROUND DETENTION DETAILS

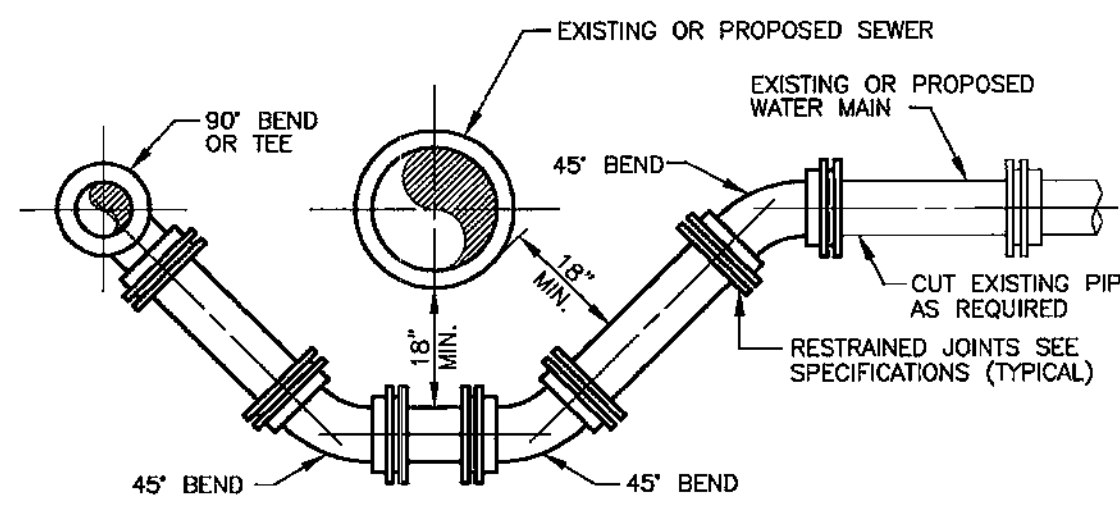
PROJECT: B.N.C. FACILITY EXPANSION
 PREPARED FOR: BRIGHTON NAZARENE CHURCH
 DATE: 7/2/13

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: NO SCALE
 JOB NO. 13-100
 DATE: 5-31-13
 SHEET NO. 8

PIPE RESTRAINT SCHEDULE
GROUND BURIED PRESSURE PIPE — POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	—	—
6	19	8	4	2	58	31	—
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	188

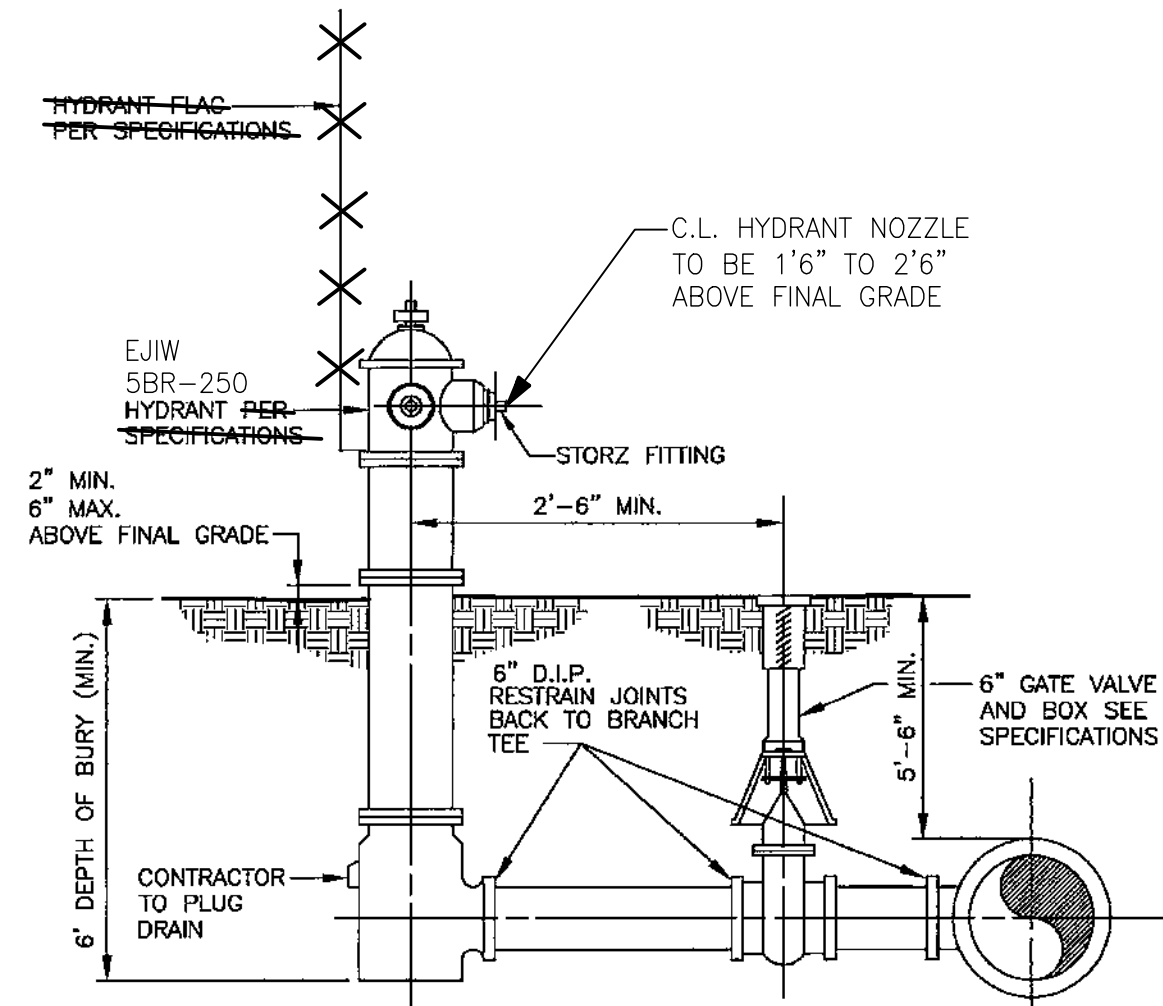
- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
 - IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
 - THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
 - THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
 - IF TIE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.
- * SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
BASED UPON: INTERNAL PRESSURE: 180
PIPE DEPTH: TYPE 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2



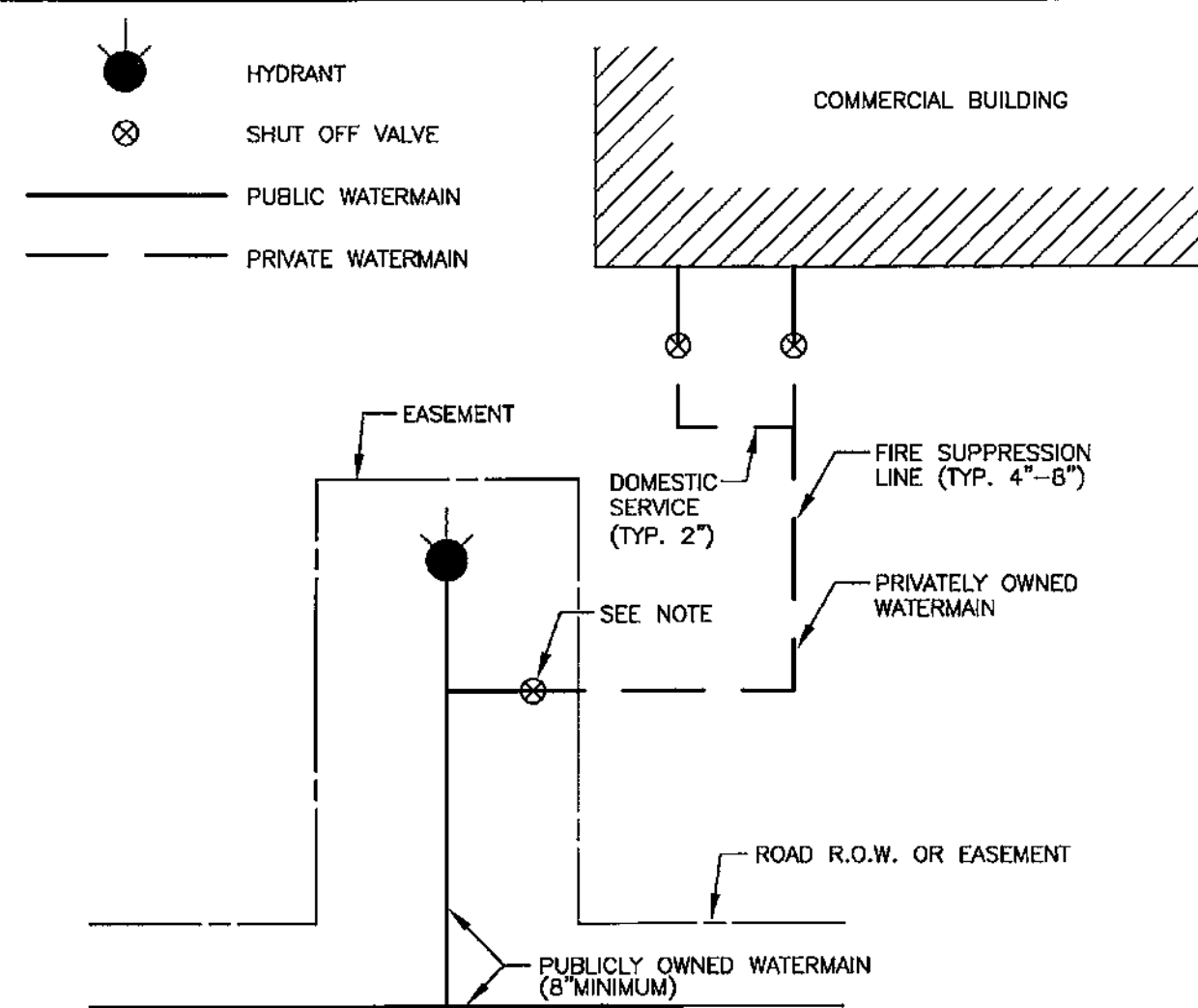
WATER MAIN RELOCATION

PROPOSED WATERMAIN CONNECTION EAST OF THE PROPOSED CHURCH ADDITION IS TO BE A CUT-IN SLEEVE AND TEE CONNECTION.

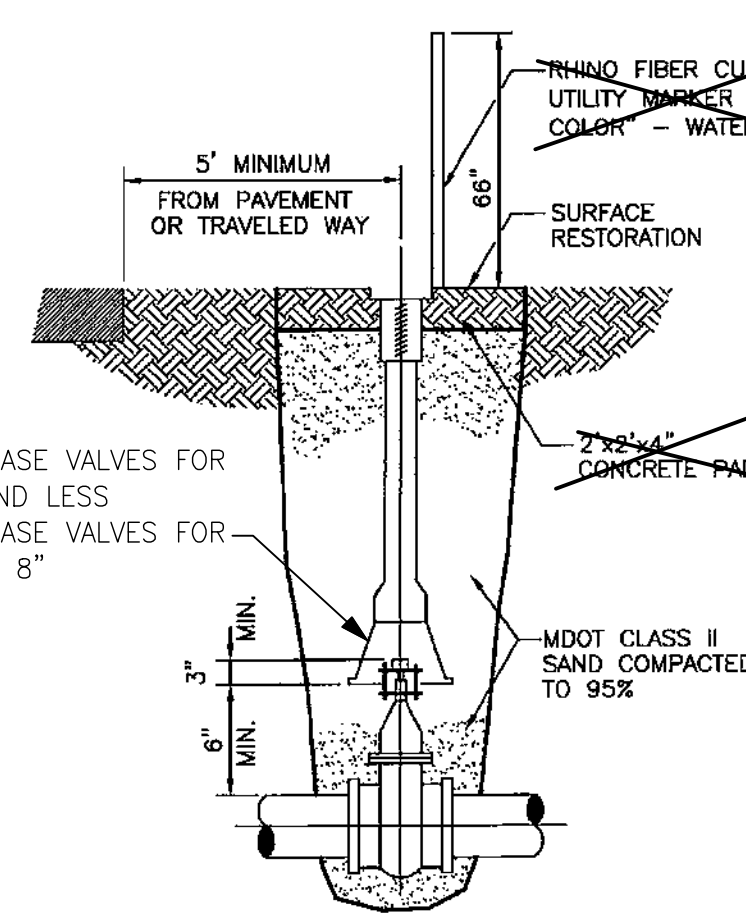
WATERMAIN CONNECTION NOTE



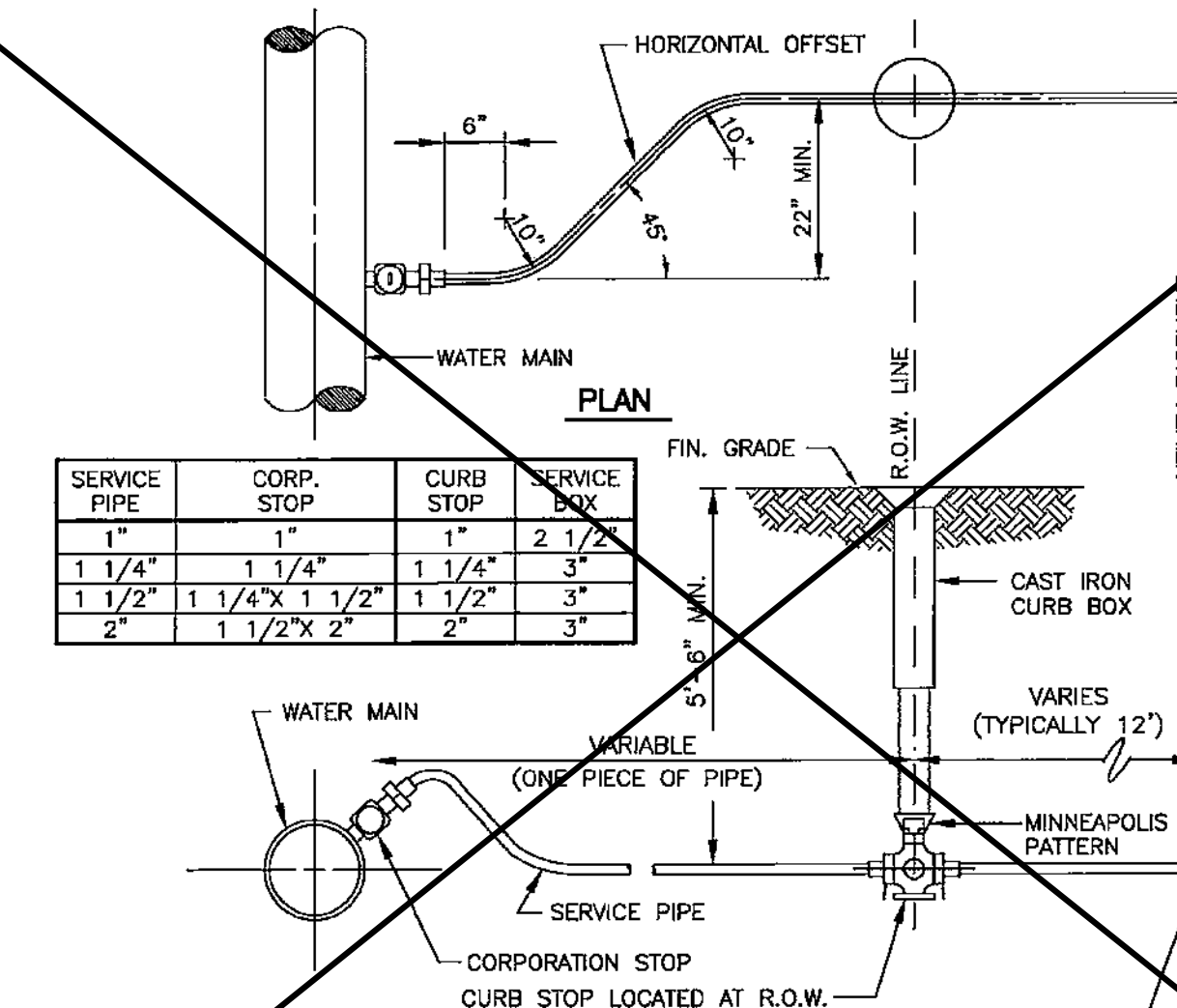
FIRE HYDRANT ASSEMBLY



COMMERCIAL BUILDING WATER SERVICE LAYOUT

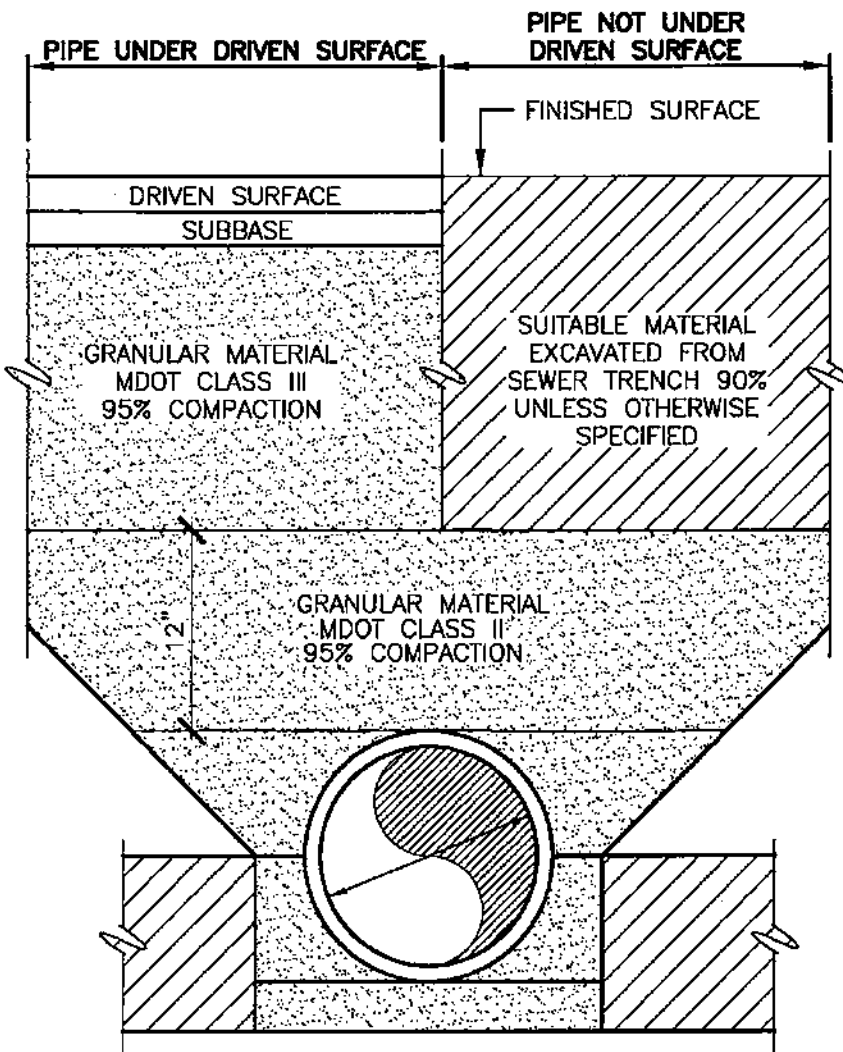
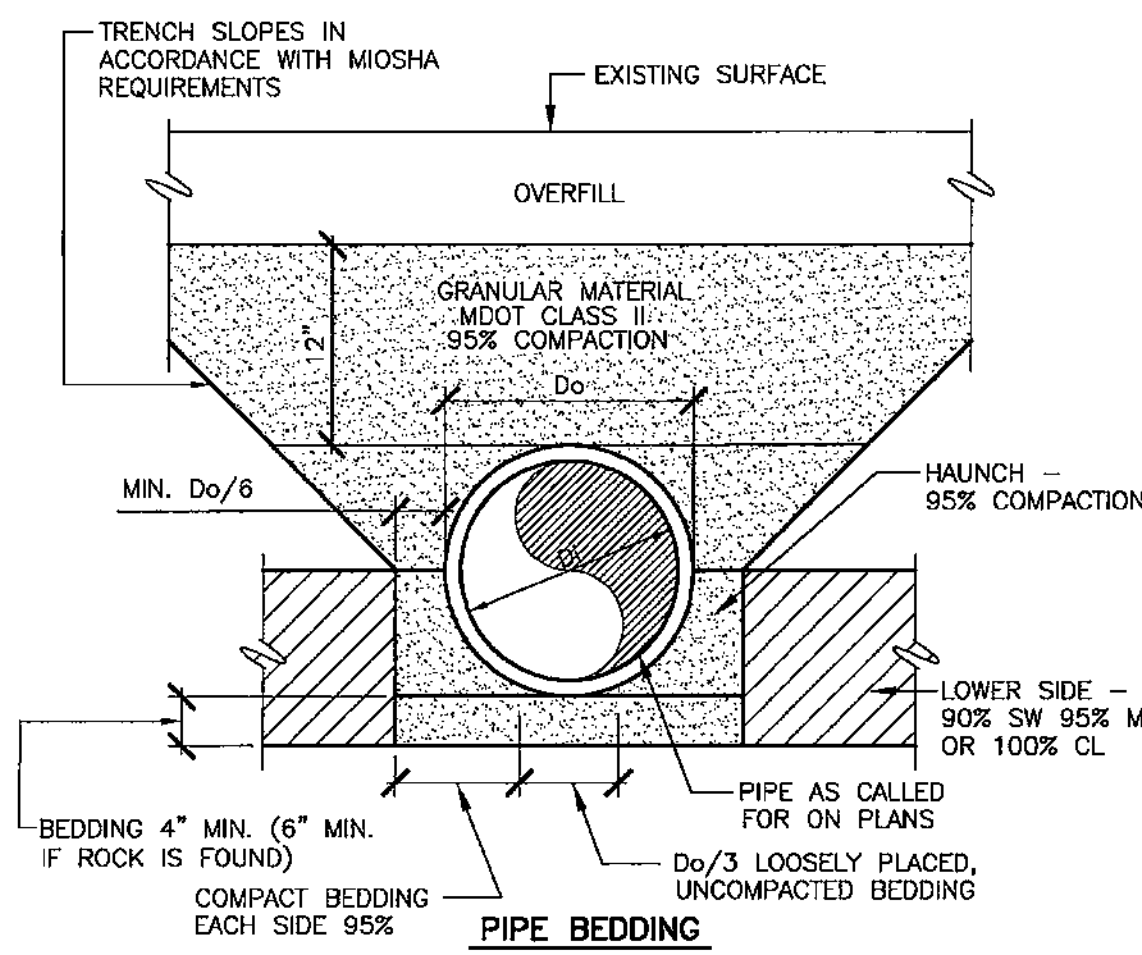


GATE VALVE AND BOX

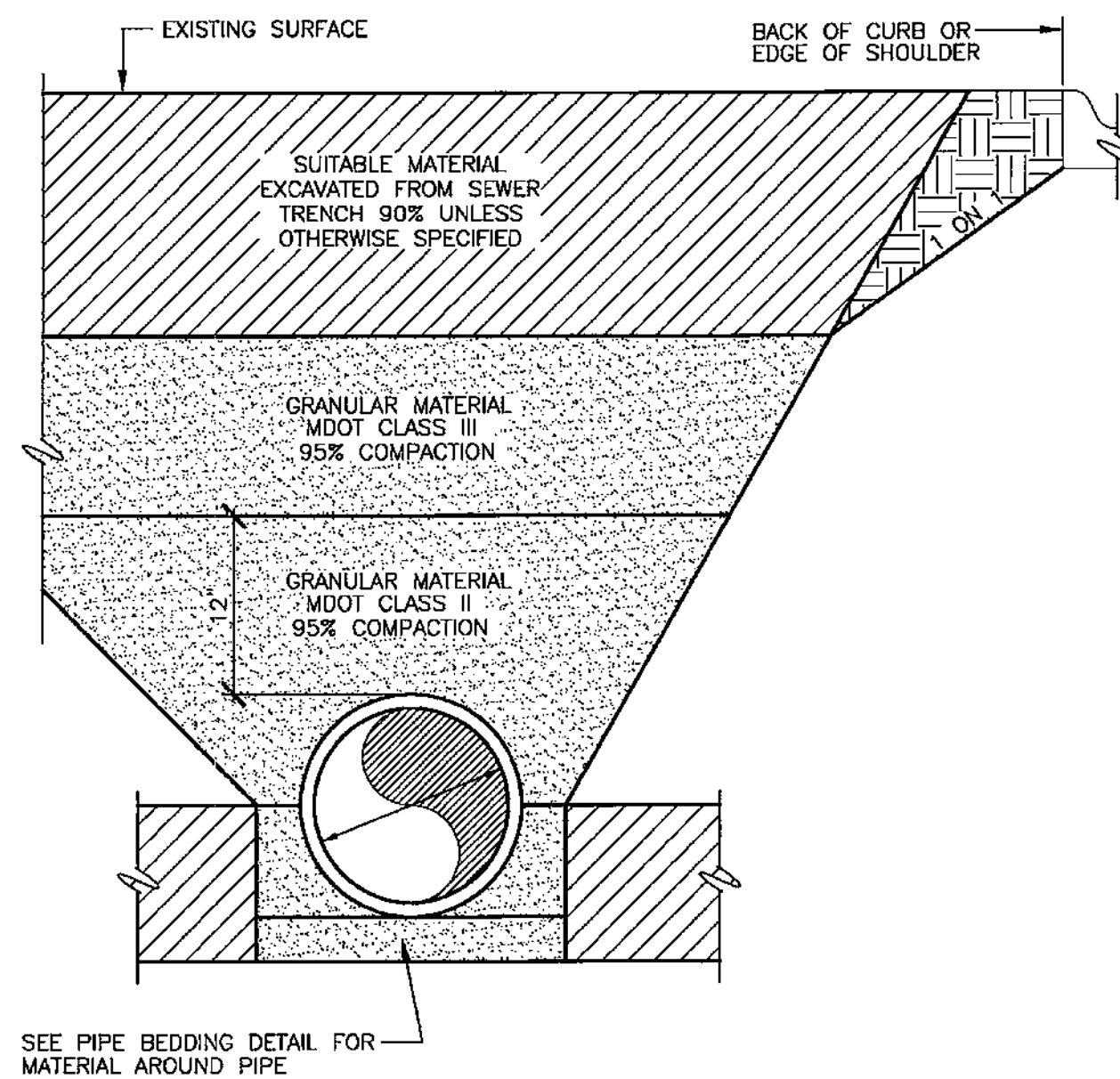


SECTION WATER SERVICE LATERAL

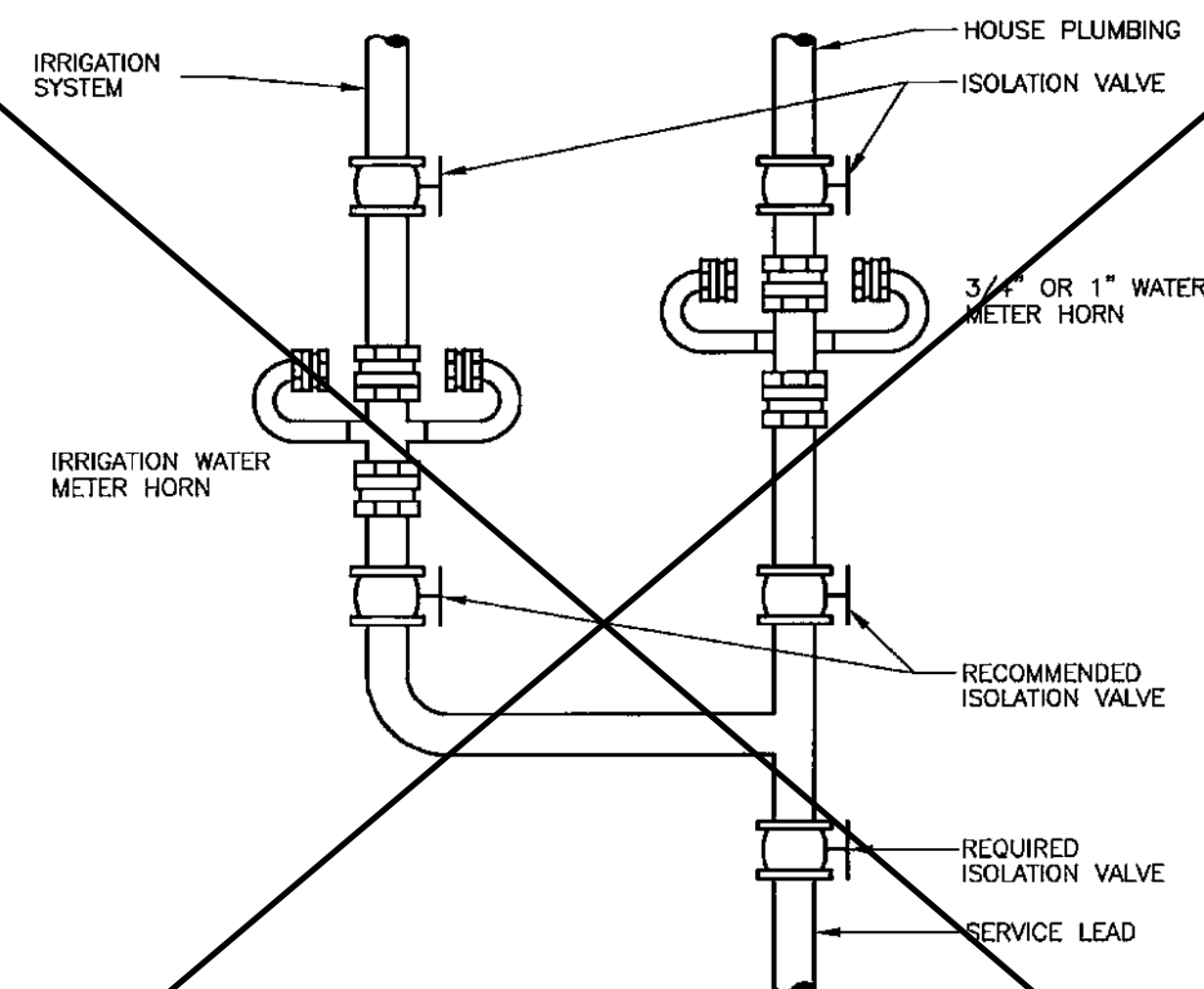
- NOTES:
- COMPACTION PRESENTED AS MINIMUM STANDARD PROCTOR VALUES.
 - MATERIALS AROUND THERMOPLASTIC PIPE WITH DIAMETER < 6 INCHES SHALL PASS 0.5 INCH SIEVE, MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.
 - MATERIALS AROUND HDPE PIPE TO BE MDOT 6A OR 21AA.
 - DRIVEN SURFACE IS DRIVEWAY, PARKING AREA, ROAD BED OR SHOULDER.



TRENCH EXCAVATION & PIPE BEDDING



PIPE WITHIN INFLUENCE OF DRIVEN SURFACE



NOTE:
ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).

TYPICAL METER HORN INSTALLATION

MARION HOWELL GENOA OCEOLA
Sewer and Water Authority

**WATER MAIN
STANDARD DETAILS**

Scale: NONE
Issued Date: 10-22-2007

BOSS ENGINEERING
ENGINEERS SURVEYORS PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: BOSS@BOSS-ENG.COM)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843-5408-1670
(800) 246-6735

B.N.C. FACILITY EXPANSION
BRIGHTON NAZARENE CHURCH
7669 BRIGHTON ROAD
BRIGHTON, MI 48116
810-227-6600

PROJECT: B.N.C. FACILITY EXPANSION
PREPARED FOR: BRIGHTON NAZARENE CHURCH

NO.	BY	REVISION	PER	DATE

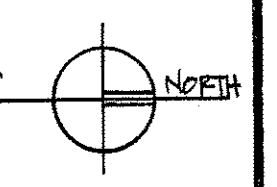
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE: NO SCALE
JOB NO. 13-100
DATE: 6/27/13
SHEET NO. 9



± 92'-0"
EXISTING BLDG
INTERIOR RENOVATIONS

120'-4"
PROPOSED BLDG

PROPOSED
FIRST FLOOR PLAN - A
SCALE: 1/8" = 1'-0"



MSB 308 Ypsil



YOUTH
CTR

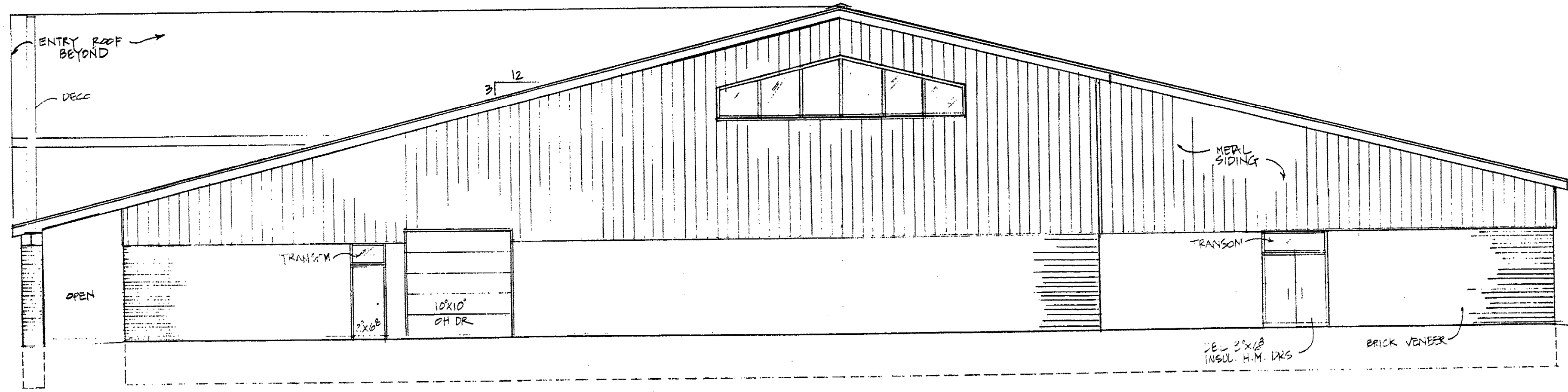
Sahba La'al, Architect

BRIGHTON, MI

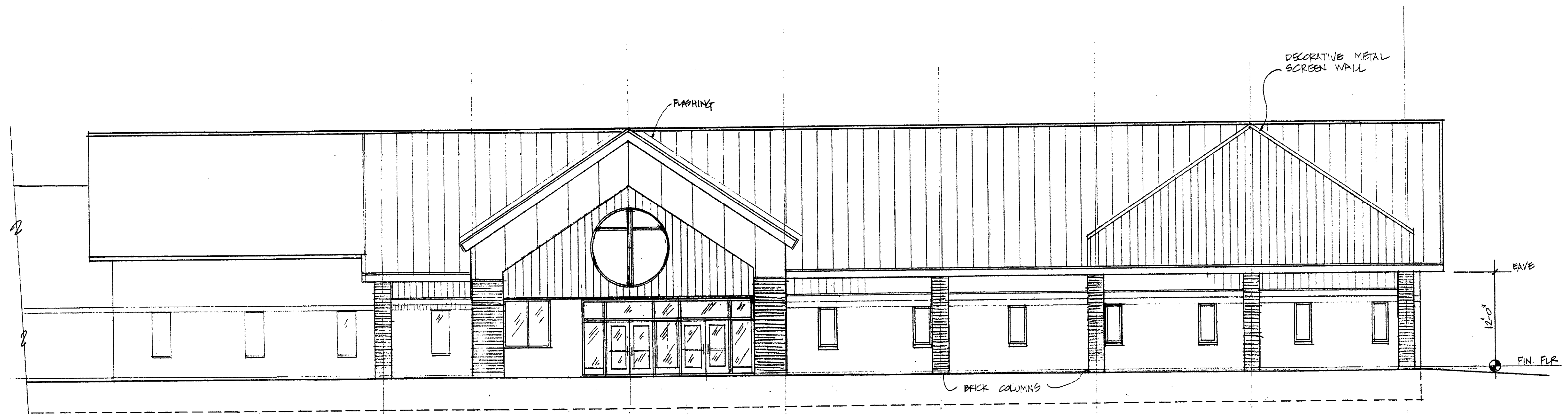
BRIGHTON CHURCH OF THE NAZARENE
PROPOSED FLOOR PLAN - A

REVISIONS:
4/25/13
5/10/13
5/13/13
5/14/13

PROJECT:
21305



END (NORTH)
ELEVATION
1/8"=1'-0"



FRONT (EAST) ELEVATION
SCALE: 1/8"=1'-0"





2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

MEMORANDUM

TO: Planning Commission

FROM: Kelly VanMarter, Assistant Township Manager/Community Development Director

DATE: September 5, 2013

RE: New Qdoba Restaurant – Request for Table

Dear Commissioners,

Township staff and I have been working with a petitioner for a new Qdoba Restaurant located on the vacant outlot in front of the Meijers in Howell. In an effort to address a number of comments in the first round of review letters, the applicant has requested more time to prepare a revised plan for a second review. This decision was recommended by and is supported by staff. I have included the first draft site plan as well as the review letters for your information. Revised plans and new review letters will be presented at a future meeting.

The statutory notice requirements for a Special Land Use require mailing to all owners and occupants of real property within 300' of the subject site. These notices must be mailed at least 15 days in advance of the proposed meeting. For this project, the notice requirements included nearly 200 letters and these letters were mailed BEFORE the applicant and staff agreed to delay. Because of this, I am requesting that the Planning Commission open this item and hold the public hearing and then table it to the next regularly scheduled meeting on Tuesday, October 15, 2013. If we provide the opportunity for public comment and notify them of the future date, we will save money having to resend the large number of mailed notices.

I hope the Planning Commission finds this acceptable and I welcome any comments or questions you may have in this regard.

Sincerely,

Kelly VanMarter
Assistant Township Manager/Community Development Director

SUPERVISOR

Gary T. McCririe

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

MANAGER

Michael C. Archinal

TRUSTEES

H. James Mortensen

Jean W. Ledford

Todd W. Smith

Linda Rowell



LSL Planning, Inc.

Community Planning Consultants

August 21, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Qdoba Restaurant/Retail Development – Special Land Use and Site Plan Review #1
Location:	Outlot of Meijer property – north side of Grand River Avenue, west of Latson Road
Zoning:	MU-PUD Mixed Use Planned Unit Development District

Dear Commissioners:

At the Township’s request, we have reviewed the site plan (dated 7/31/13), as well as the application for special land use proposing development of a 4,022 square foot commercial building on an outlot in the southwest corner of the Meijer property. The building is intended for a Qdoba restaurant with a drive through window and outdoor seating, along with space for a second commercial tenant.

The site and adjacent properties are part of a Mixed Use PUD project, although the McDonald’s restaurant to the west and the gas station to the east are zoned RCD. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and Master Plan.

A. Summary

1. In our opinion, the general special land use standards of Article 19 are met; however, any issues raised by the Fire Department or Township Engineer must be addressed.
2. An amendment to the Lorentzen PUD is needed to accommodate the dimensional deviations proposed.
3. The Planning Commission has approval authority over the building elevations. The amount of EIFS greatly exceeds that allowed by Ordinance.
4. The site plan is deficient by 8 parking spaces, although the applicant is pursuing a shared parking arrangement with the adjacent Meijer store.
5. The one-way drive aisles may be reduced in width, which will reduce impervious surface and allow for increased side parking setbacks.
6. The lack of a bypass lane and deficient number of stacking spaces could result in a poor vehicular circulation pattern.
7. The required loading/unloading space must be identified on the site plan.
8. In our opinion, the amount of landscaping provided appears to be less than what is provided elsewhere in the PUD.
9. The exterior of the waste receptacle enclosure should match the materials used on the building.
10. The project could benefit from a pedestrian connection between the public sidewalk and building entrance.
11. There are light intensities along the rear and side lot lines in excess of the 1.0-footcandle maximum.
12. The submittal proposes 5 wall/canopy signs, while a maximum of 2 may be allowed by the Planning Commission.
13. The site plan does not clearly identify the location of the proposed ground sign.
14. No details are provided for the proposed outdoor seating.
15. Anticipated trip generation numbers need to be included with the Impact Assessment to determine whether a traffic study is warranted.



Aerial view of site and surroundings (looking north)

B. Proposal/Process

The Lorentzen PUD allows restaurants with drive throughs and outdoor seating as special land uses. Meanwhile, the second tenant space, for which a specific use is not identified, will be subject to the same use requirements of the PUD. That is, if the space is intended as a general commercial use, it will likely be permitted by right; however, if the proposed use is listed as a special land use, then an additional approval will be necessary.

One additional procedural element relates to proposed dimensional deviations. Since the ZBA has limited authorities over PUDs, an amendment to the PUD is needed, although there is no reference to this in the submittal.

Following a public hearing, the Planning Commission may forward its recommendation on both the special use and site plan to the Township Board for their consideration.

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

- 1. Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties along Grand River as Regional Commercial, which is intended for “higher intensity commercial uses that serve the comparison shopping needs of the entire community and the regional market.” Restaurants, including fast-food, are specifically identified as uses intended within this category.
- 2. Compatibility.** The site is located on the north side of Grand River Avenue in an area developed with a broad range of commercial uses, including other drive through restaurants. Given the established land use pattern in the area, the proposed project is generally expected to be compatible with surrounding land uses.

One item worth noting is the inclusion of another drive through restaurant less than 100 feet from an existing fast food restaurant. Although this PUD was approved before current requirements, today’s Zoning Ordinance requires a spacing of at least 500 feet between such uses.

3. **Public Facilities and Services.** As a property fronting Grand River Avenue and surrounded by development, we are under the impression that necessary facilities and services are in place for the petitioner to access. Furthermore, the Impact Assessment notes that infrastructure was “put in place in anticipation of development of the parcel.” With that being said, the applicant must address any comments provided by the Fire Department or Township Engineer with respect to this criterion.
4. **Impacts.** The site is located amongst other commercial developments along the Township’s primary commercial corridor and there are no sensitive environmental features that we are aware of that may be impacted by the proposal.
5. **Mitigation.** If any additional concerns arise as part of this review process, the Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed project.

D. Site Plan Review

1. **Dimensional Requirements.** The project has been reviewed for compliance with the dimensional requirements of this PUD, as follows:

District	Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Front Yard	Side Yard	Rear Yard	Parking		
MU-PUD	70	15	50	20 (front) 10 (side/rear)	35’	35% building 75% impervious
Proposal	86	57 (E) 58 (W)	26	20 (front) 0 (E side) 4 (W side) 10 (rear)	26’-3”	10.9% building 73.5% impervious

As referenced under Section B of this letter, the rear yard building setback and side yard parking setbacks are not met. As a PUD project, the proposal to encroach into required setbacks results in the need to amend the PUD to allow these dimensional deviations.

2. **Building Materials and Design.** Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The submittal includes elevation drawings and color renderings for the Commission’s consideration.

The primary building material is EIFS with large horizontal stone elements and large window areas. Based upon the information provided on Sheet A200, the amount of EIFS greatly exceeds that permitted by Section 12.01. Additionally, the PUD Agreement requires that each site plan submitted shall include a description (or illustration) of how the design is consistent with the architecture of other sites in the PUD. We request the applicant provide this information.

3. **Parking.** Note 6 on Sheet 1 of 2 provides a parking breakdown noting the need for 54 spaces. The proposed site plan provides 46 with a note that a shared parking agreement is being sought with Meijer for the additional 8 spaces, including the required spaces for semi-trucks and recreational vehicles.

The parking spaces, drive aisles and number of barrier free spaces all meet or exceed the standards of Article 14, although parking spaces must be double striped or “looped.” The drive aisles along the sides of the building appear to be intended for one-way travel, in which case the width may be reduced from the 20 feet provided to 15 feet. This could reduce the amount impervious surface (which is rather high) and increase the deficient side yard parking setbacks.

4. **Vehicular Circulation.** The site will be accessed via a shared drive off of Grand River and, as noted above, generally appears to have a one-way travel movement. The main drive aisles appear to function properly; however, we are concerned by the lack of a bypass lane for the drive through, as well as a deficient number of stacking spaces. Specifically, a bypass lane is a typical requirement for current drive throughs and the shortage of stacking spaces could push stacking into drive aisles causing conflicts. With respect to the latter, the applicant claims that 7 stacking spaces are adequate for their proposed operation; however, Article 14 does not provide discretion to allow a reduction.
5. **Loading.** Section 14.08.08 requires 1 loading space, which are to be located in a rear or side yard not directly visible to a public street. The site plan does not identify the required space, which is to contain 500 square feet, unless otherwise approved by the Planning Commission. Given the nature of the proposed use, the applicant must identify an area for the required space. Given the proposed site design, it is likely that deliveries will need to occur outside of business operating hours so as to not disrupt vehicular circulation.
6. **Landscaping.** The table below is a summary of the landscaping required by Section 12.02:

Location	Requirements	Proposed	Comments
Front yard greenbelt	6 canopy trees 20-foot width	6 canopy trees 22-foot width	Requirement met
Parking lot	4 canopy trees 2' tall hedgerow 400 s.f. of landscaped area	4 canopy trees 2' tall hedgerow 2,684 s.f. of landscaped area	Requirement met

Typically, a buffer zone “C” would be required along the side and rear lot lines; however, in the case of a PUD, landscaping in these areas is determined during review. We are unaware of what the conceptual PUD plan noted in terms of landscaping, but conventional buffer zone requirements result in the need for approximately 28 trees or 112 shrubs (or a combination thereof) along the rear and side lot lines.

The PUD Agreement states that “landscaping within the PUD shall demonstrate consistency in terms of design and materials.” In our opinion, the amount of landscaping proposed generally appears to be less than what is provided for nearby properties within the PUD.

7. **Waste Receptacle and Enclosure.** The project includes enclosed waste receptacles northeast of the proposed building. The site plan identifies the required concrete base pad, while Sheet A301 identifies a 3-sided split face CMU enclosure with a gate across the 4th side. Generally, the Township requires enclosures to match the materials used on the building and there is no split face CMU shown on the elevation drawings. The applicant should utilize a face material for the enclosure that matches the building.
8. **Pedestrian Circulation.** The site plan identifies a concrete sidewalk within the Grand River right-of-way, as well as sidewalks around the perimeter of the building. Given the nature of the proposed use, the project could benefit from a pedestrian connection between the public sidewalk and building entrance.

9. Exterior Lighting. The submittal identifies 12 new light fixtures – 8 pole mounted parking lot fixtures, 2 wall mounted fixtures and 2 decorative poles along the site’s frontage. Fixture types, pole heights and overall intensity comply with Section 12.03; however, there are readings along the side and rear lot lines that exceed the 1.0-footcandle limit.

10. Signs. The sign package provides details for 2 wall signs, 1 ground sign, 3 canopy signs and 1 window sign. The PUD Agreement notes that 1 ground sign of up to 60 square feet and wall signs with channel cut letters are permitted.

Current sign regulations allow 1 wall or canopy sign, although a second may be permitted by the Planning Commission in accordance with Footnote 2 under Table 16.1. Additionally, the size and height of the ground sign comply with the PUD Agreement; however, its placement is not clearly depicted on the site plan.

11. Outdoor Seating. There are references in the submittal to outdoor seating for the proposed restaurant; however, no details are provided. We recommend the applicant review Section 7.02.02(i) for direction on current requirements.

12. Impact Assessment. The submittal includes an Impact Assessment (dated 8/8/13). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

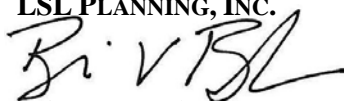
With that being said, we request the applicant include the anticipated trip generation so the Township can determine whether a traffic study is needed in accordance with Section 18.07.09.

In closing, there are several somewhat minor issues that add up to a larger concern. In this instance, we are of the opinion that the site is being over-built by virtue of the reduced setbacks, parking and stacking deficiencies, lack of a bypass lane, reduced amount of landscaping and high percentage of impervious surface. We believe that elimination of the second tenant space along with some changes to the site plan would result in an improved project that is more in keeping with the original intent of the Lorentzen PUD, as well as current Ordinance requirements.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at borden@lsplanning.com.

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Senior Planner



August 19, 2013

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

Re: Qdoba Site Plan Review

Dear Ms. Van Marter:

We have reviewed the impact assessment, site plan documents, and the letter from Southwind Restaurants and Excel Engineering dated August 8, 2013. The proposed 0.85 acre development on the Meijer store out lot would include an approximate 4022 sft building housing a Qdoba restaurant in one division and a yet to be determined tenant in the other. Tetra Tech reviewed the documents and offers the following additional comments:

IMPACT ASSESSMENT

1. G. Requests calculations for pre- and post-development flows in equivalents to a single family home for sites with public sanitary sewer service, and these were not submitted. Annual flows were provided, but in order for the Township to assess potential tap fees for water and sewer, the equivalent user factor should be calculated per the July 2008 Design Standards for Sanitary Sewer and Water.
2. I. Notes the drive-thru stacking requirement is high and excessive for this operation and is addressed through the inclusion of waiting spaces. There is, however, no paved exit space for vehicles that may get in line and decide to not use the drive-thru, needing an "exit". Please consider when reviewing drive-thru operations.
3. The drainage calculations for the on-site system are sufficient; however, details on the available capacity in the 21" outlet are not explained. The impact statement references that the 21" pipe was stubbed onto this parcel, but the site plan shows the 21" currently accepting an 18" pipe from the adjacent parcel to the east. While a 21" pipe would be adequate for the drainage from this site, the capacity available in the 21" pipe cannot be evaluated without including the upstream calculations.

SITE PLAN

Sheet 1 of 2

1. Proposed 2" water service is currently shown too close to the proposed sanitary service lateral. At least 10' horizontal spacing must be provided. It is also recommended to investigate tapping

the 12-inch water main extending onto the Meijer property instead of the main in Grand River Avenue. This main and the existing public easement should be shown on the site plan. All existing and proposed utilities and easements must be clearly shown on the site plan drawings.

2. Please label existing outlet pipe in the plan view. Construction note incorrectly states to install 4' diameter CB over existing 12" storm; should be 21". All proposed catch basins will require 2' deep sumps, as this would now become an in-line inlet. Due to potential issues with cleaning the sump in a nearly 10' deep catch basin, it is recommended to look into options to install a catch basin to collect the 0.21 acre area before discharging to the storm main existing on the site.
3. Note to convert yard drain to MH includes raising the rim over 3 vertical feet, which will require that the top of the MH structure is removed and replaced. Please provide a detail for this with construction drawings. No pipe is shown entering at the proposed cut in SW invert.
4. 101 foot long stretch of 12" sewer is labeled as 12" storm U.D. with sock; should be standard storm sewer.
5. Include notes locations and details of all temporary and permanent soil erosion control measures.

Sheet 2 of 2

1. Contour lines are shown going through existing bit path shown to be left in place near proposed dumpster enclosure. Based on the proposed grade, petitioner should review this area to ensure that runoff will not wash soils out down the pedestrian ramps. Contours along the eastern property line indicate a temporary construction grading easement may need to be obtained from the property to the east.
2. Notes to dub down curb at 8" bit path will require careful coordination with existing curb and path to remain to make sure the ramp meets ADA standards for accessibility. Suggest constructing ramps of concrete.

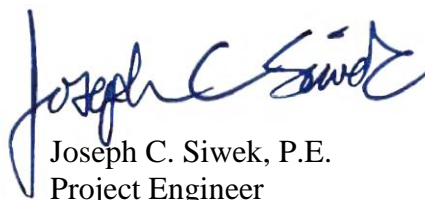
The petitioner should provide the missing information for the impact statement and make the requested clarifications to the site plan.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Unit Vice President



Joseph C. Siwek, P.E.
Project Engineer

copy: Kevin Egnatuk, Southwind Restaurants, LLC
Don DeGroot, Excel Engineering, Inc.



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

810-229-6640 Fax: 810-229-1619

August 13, 2013

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Qdoba Restaurant
3883 E. Grand River

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on August 9, 2013 and the drawings are dated July 31, 2013 with revisions dated August 7, 2013. The project is based on a new 4,022 square foot restaurant building. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition. Previous comments appear to be addressed by the applicant in the revised submittal.

1. Future project submittals shall include the proper address and street name of the project in the title block. The address indicated is an existing address.
IFC 105.4.2
2. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation.
IFC 505.1
3. The location of a key box (Knox Box) shall be indicated on future submittals. The Knox box will be located adjacent to the front door of the structure.
IFC 506.1
4. The existing hydrant on Grand River exceeds spacing. Extend a single hydrant onto the property.
IFC 506

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Michael O'Brian
Fire Chief



LINGLE DESIGN GROUP

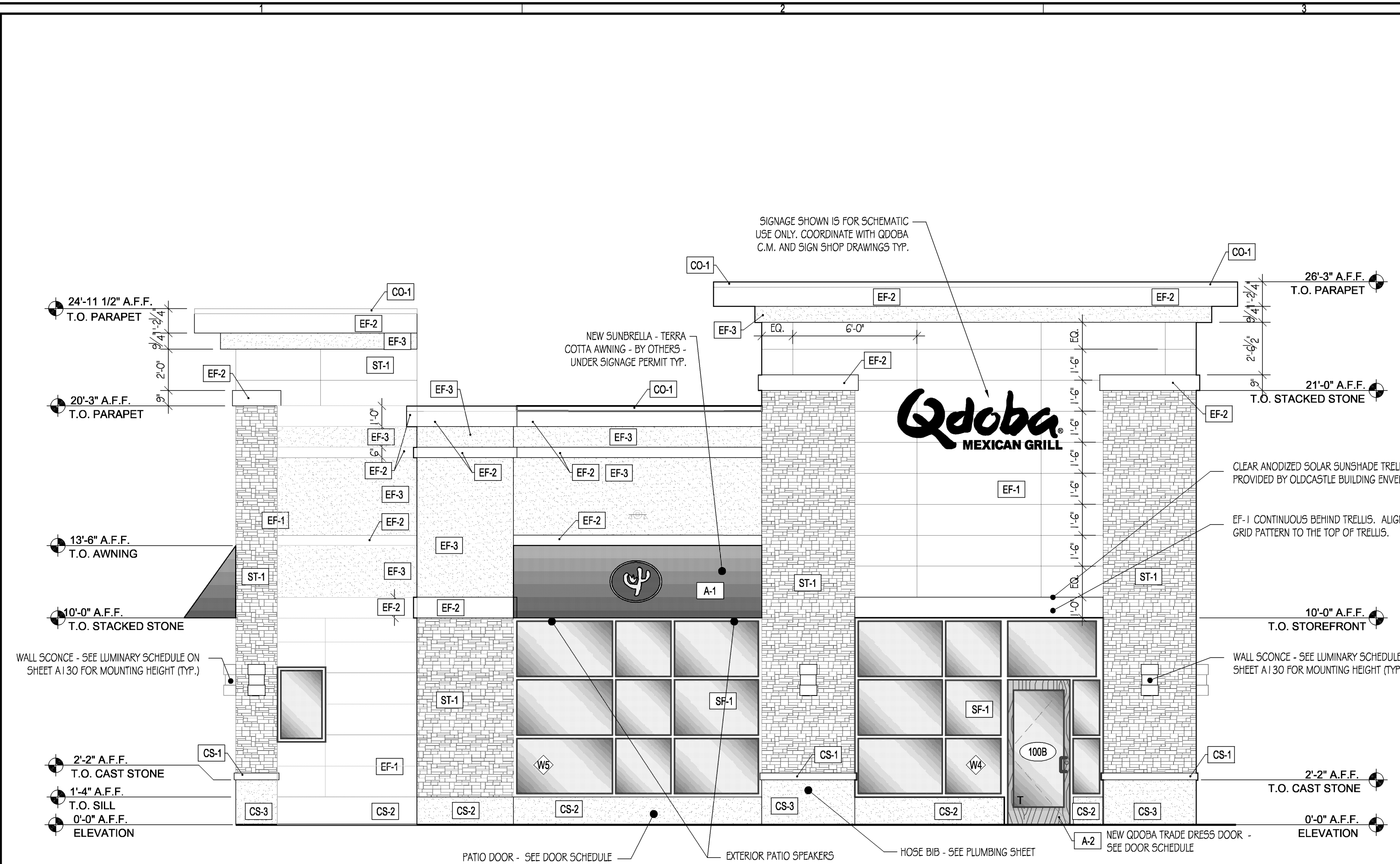


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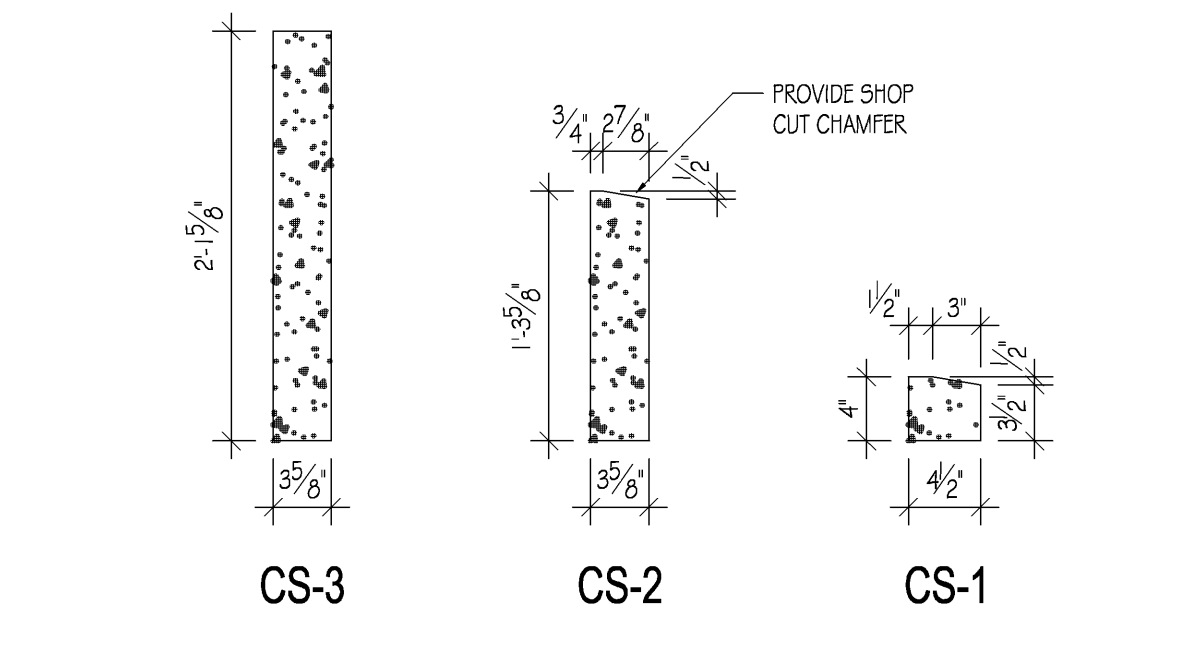
IMAGINATE

Howell Livingston - 3883 East Grand River Avenue - Howell, Michigan 48843

Qdoba
MEXICAN GRILL



C1 EXTERIOR ELEVATION (WEST) Scale: 1/4" = 1'-0"



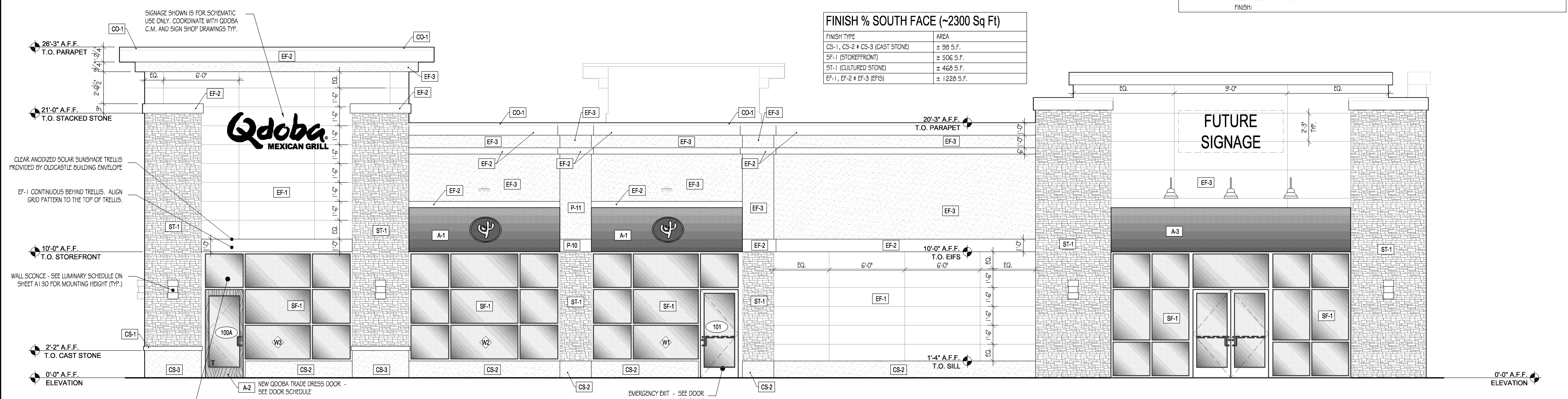
D3 CAST STONE PROFILES Scale: 1" = 1'-0"

FINISH % WEST FACE (~889 Sq Ft)

FINISH TYPE	AREA
CS-1, CS-2 & CS-3 (CAST STONE)	± 56 S.F.
SF-1 (STOREFRONT)	± 208 S.F.
ST-1 (CULTURED STONE)	± 209 S.F.
EF-1, EF-2 & EF-3 (EIFS)	± 413 S.F.

EXTERIOR FINISH SCHEDULE (March 07, 2013)

TAG #	DESCRIPTION:	LOCATION(S):	NOTES:
EXTERIOR PAINT			
P-10	MANUFACTURER: SHERWIN-WILLIAMS MATERIAL: LATEX PAINT COLOR: PURE WHITE #SW7005 FINISH: SATIN	BUILDING TRIM	TO BE USED WHEN PAINTING EXISTING ELEMENTS.
P-11	MANUFACTURER: SHERWIN-WILLIAMS MATERIAL: LATEX PAINT COLOR: CAEN STONE #SW0028 FINISH: SATIN	BASE BUILDING	TO BE USED WHEN PAINTING EXISTING ELEMENTS.
EXTERIOR FINISH / STONE			
EF-1	MANUFACTURER: GC PROVIDED MATERIAL: EIFS COLOR: CUSTOM TO MATCH CLAY POT #SW2917 FINISH: FINE SAND	ENTRY TOWER & BASE BUILDING	
EF-2	MANUFACTURER: GC PROVIDED MATERIAL: EIFS / STUCCO COLOR: CUSTOM TO MATCH PURE WHITE #SW7005 FINISH: FINE SAND	BUILDING TRIM	
EF-3	MANUFACTURER: GC PROVIDED MATERIAL: EIFS / STUCCO COLOR: VAN DYKE - DRIVIT COLOR #110 FINISH: FINE SAND	ADJACENT TENANT BASE BUILDING	
EF-3	MANUFACTURER: GC PROVIDED MATERIAL: EIFS / STUCCO COLOR: CUSTOM TO MATCH CAEN STONE #SW0028 FINISH: FINE SAND	BASE BUILDING	
ST-1	MANUFACTURER: BORAL CULTURED STONE MATERIAL: PRO-FIT LEDGESTONE COLOR: AUTUMN FINISH: FF-6015	PLASTER	
CAST STONE			
CS-1	MANUFACTURER: MIDWEST CAST STONE MATERIAL: CAST STONE S-05, 4' x 4 1/2" COLOR: 1 GAC FINISH:	CAST STONE SILL	
CS-2	MANUFACTURER: MIDWEST CAST STONE MATERIAL: CAST STONE T-04, 15 3/8" x 3 3/8" COLOR: 1 GAC FINISH:	CAST STONE BASE	
CS-3	MANUFACTURER: MIDWEST CAST STONE MATERIAL: CAST STONE T-06, 25 3/8" x 3 3/8" COLOR: 1 GAC FINISH:	CAST STONE BASE	
MISC			
A-1	MANUFACTURER: SUNBRELLA MATERIAL: FABRIC COLOR: TERRACOTTA FINISH:	QDOBA AWNINGS	
A-2	MANUFACTURER: OLDCASTLE BUILDING ENVELOPE MATERIAL: ALUMINUM COLOR: CLEAR ANODIZED FINISH:	SOLAR SUNSHADE TRELLIS	CONTACT: OLDCASTLE BUILDING ENVELOPE, RANDI SCHIEDER, (800) 863-4567, RSchieder@OldcastleBE.com.
A-3	MANUFACTURER: SUNBRELLA MATERIAL: FABRIC COLOR: TAN STYLE 4116 FINISH:	ADJACENT TENANT AWNINGS	
CO-1	MANUFACTURER: GC PROVIDED MATERIAL: ALUMINUM COLOR: NATURAL FINISH:	PARAPET CAP - METAL FLASHING	
SF-1	MANUFACTURER: GC PROVIDED MATERIAL: ALUMINUM - DOUBLE PANE LOW E GLAZING COLOR: CLEAR ANODIZED FINISH:	STOREFRONT	

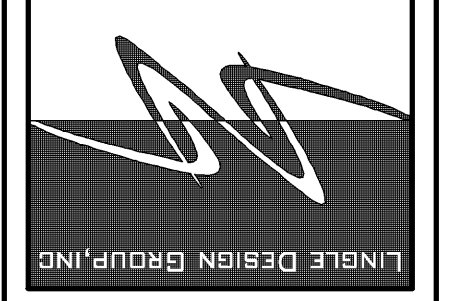


A1 EXTERIOR ELEVATION (SOUTH) Scale: 1/4" = 1'-0"

FINISH % SOUTH FACE (~2300 Sq Ft)

FINISH TYPE	AREA
CS-1, CS-2 & CS-3 (CAST STONE)	± 96 S.F.
SF-1 (STOREFRONT)	± 506 S.F.
ST-1 (CULTURED STONE)	± 466 S.F.
EF-1, EF-2 & EF-3 (EIFS)	± 1228 S.F.

LINGLEDDESIGNGROUP, INC.
WEST MAIN STREET
LENA, IL 61048 158
PHONE: 815-369-9155
FAX: 815-369-4495
WWW.LINGLEDDESIGN.COM



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PRELIMINARY NOT FOR CONSTRUCTION

Qdoba MEXICAN GRILL
Saddle Creek - 346 N. Saddle Creek Road
Omaha, NE 68132

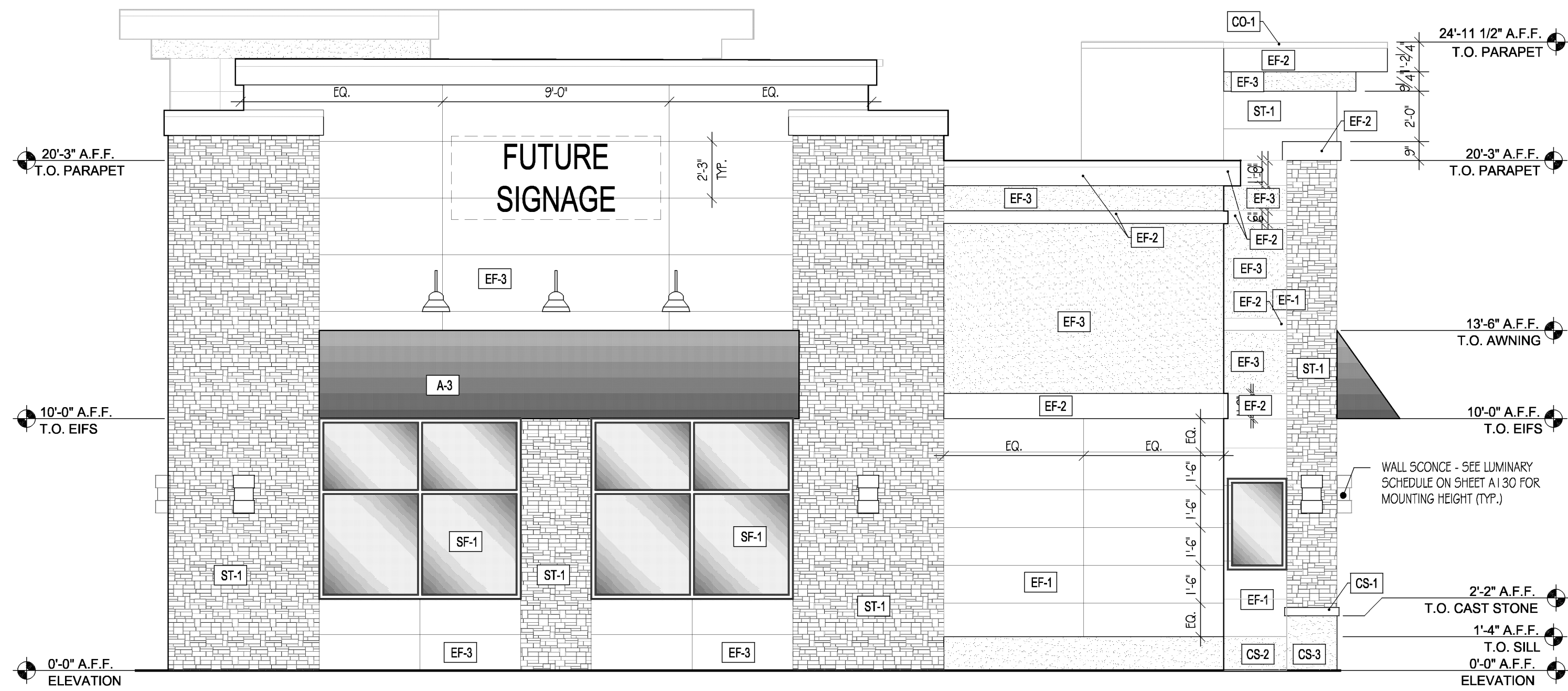
REVISIONS:

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1	10/17/12	PROPOSED EXTERIOR ELEVATIONS
2	02/15/13	PROPOSED EXTERIOR ELEVATIONS
3	04/03/13	PROPOSED SITE PLAN
4	06/13/13	PROPOSED SITE PLAN
5	06/19/13	REVISED PER D/T OPTION A & B
6	06/25/13	REVISED PATIO LOCATION

PROJECT NUMBER: 120810
DRAWN BY: JTC
CHECKED BY:

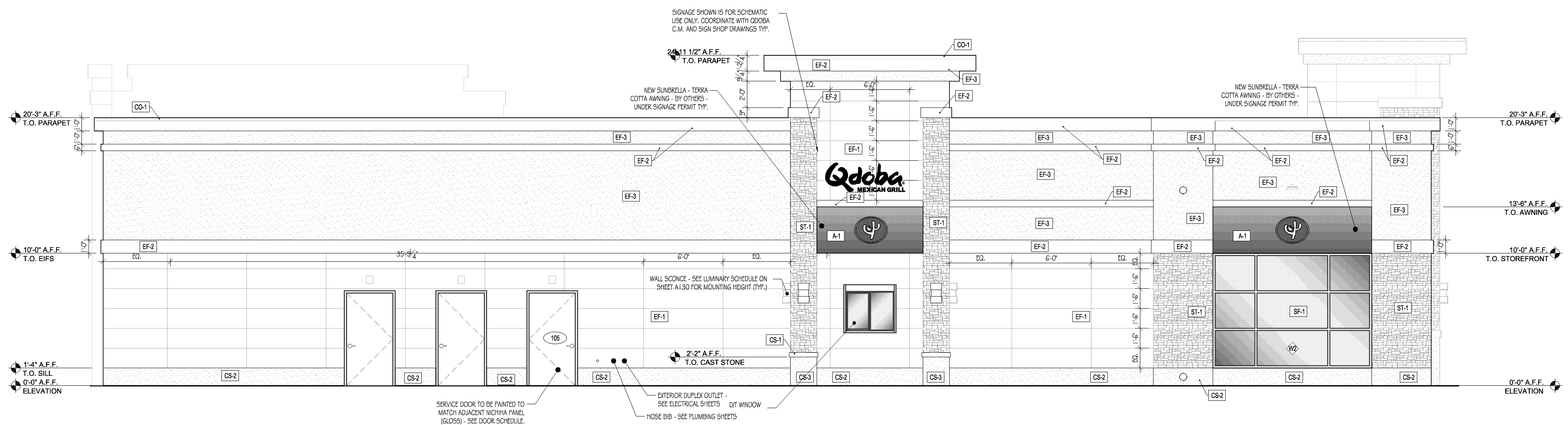
SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A200



C1 EXTERIOR ELEVATION (EAST)

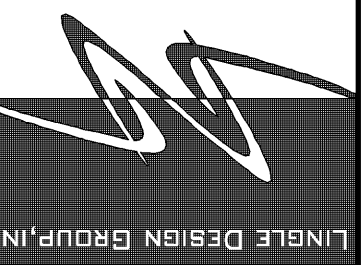
Scale: 1/4" = 1'-0"



A1 EXTERIOR ELEVATION (NORTH)

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

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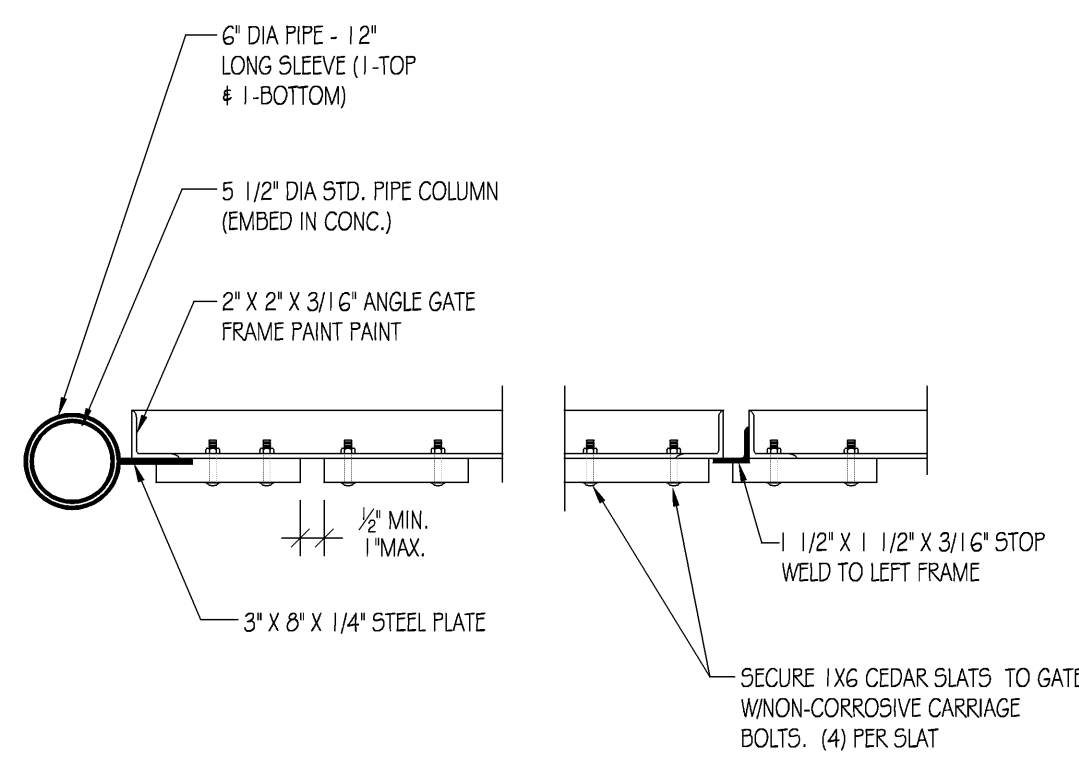
Qdoba
 MEXICAN GRILL
 Saddle Creek - 340 N. Saddle Creek Road
 Omaha, NE 68132

REVISIONS:	DATE:	DESCRIPTION:
#		
1	10/17/12	PROPOSED EXTERIOR ELEVATIONS
2	02/15/13	PROPOSED EXTERIOR ELEVATIONS
3	04/03/13	PROPOSED SITE PLAN
4	06/13/13	PROPOSED SITE PLAN
5	06/19/13	REVISED PER/D/T OPTION A & B
6	06/25/13	REVISED PATIO LOCATION

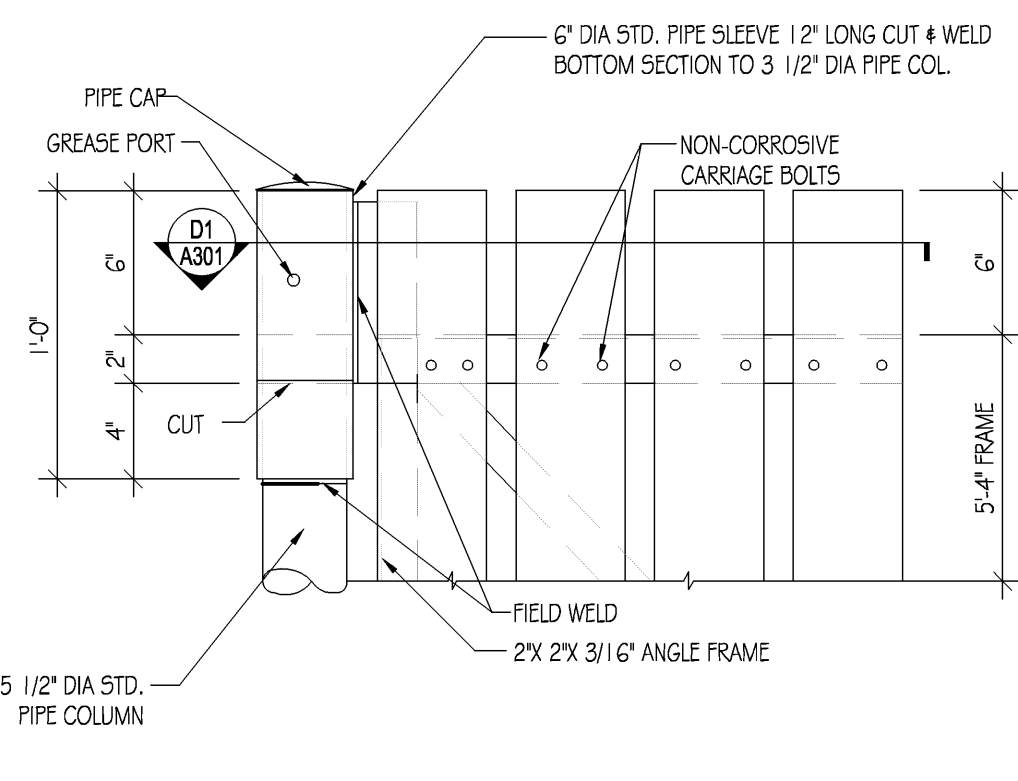
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 DRAWN BY: JTC
 CHECKED BY:

SHEET TITLE:
 EXTERIOR ELEVATIONS

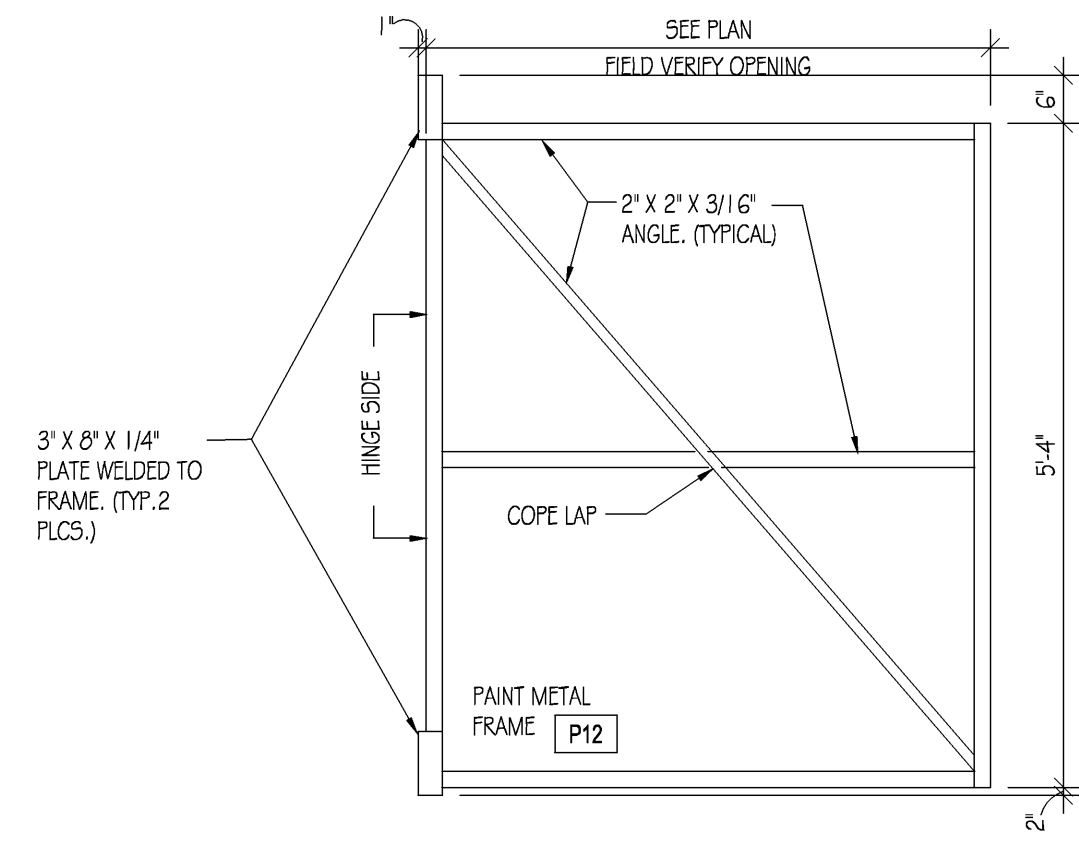
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 A201



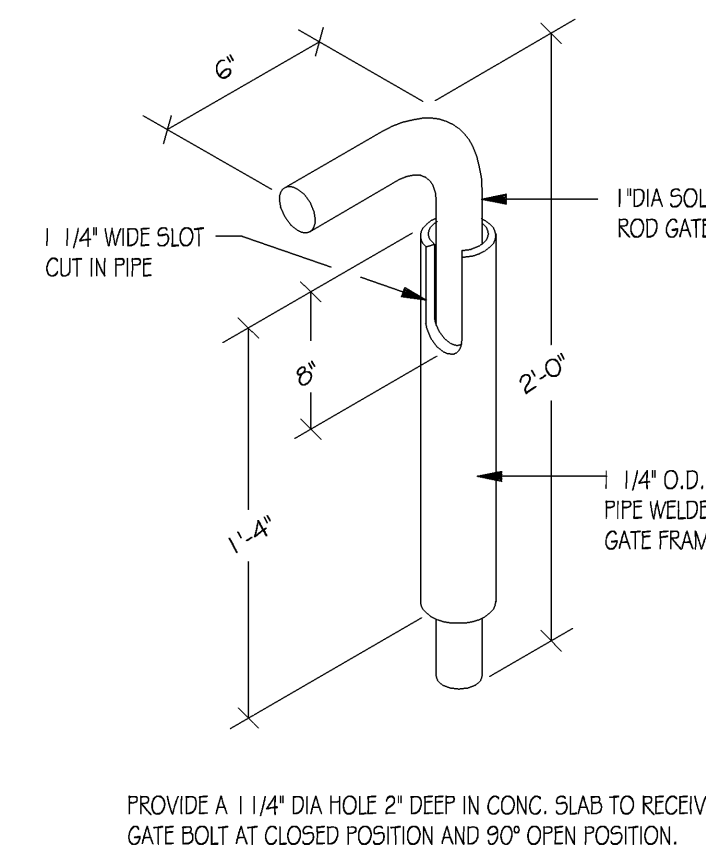
D1 GATE DETAIL - TOP VIEW
Scale: 1/4" = 1'-0"



D2 GATE DETAIL - FRONT VIEW
Scale: 1/4" = 1'-0"



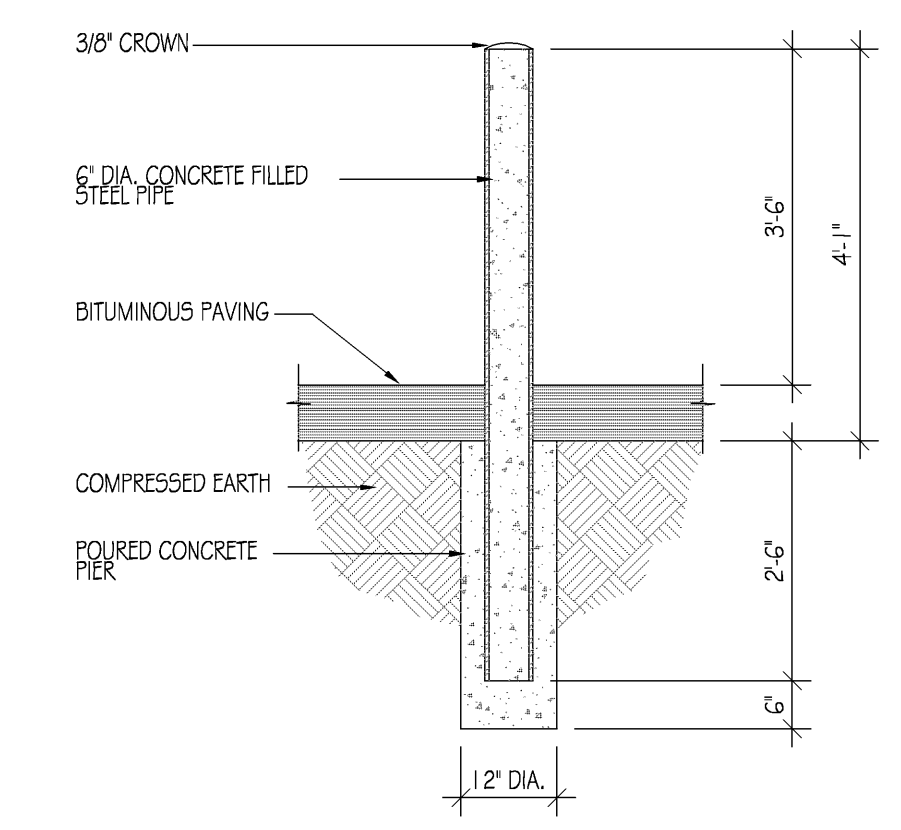
D3 GATE DETAIL - FRAME
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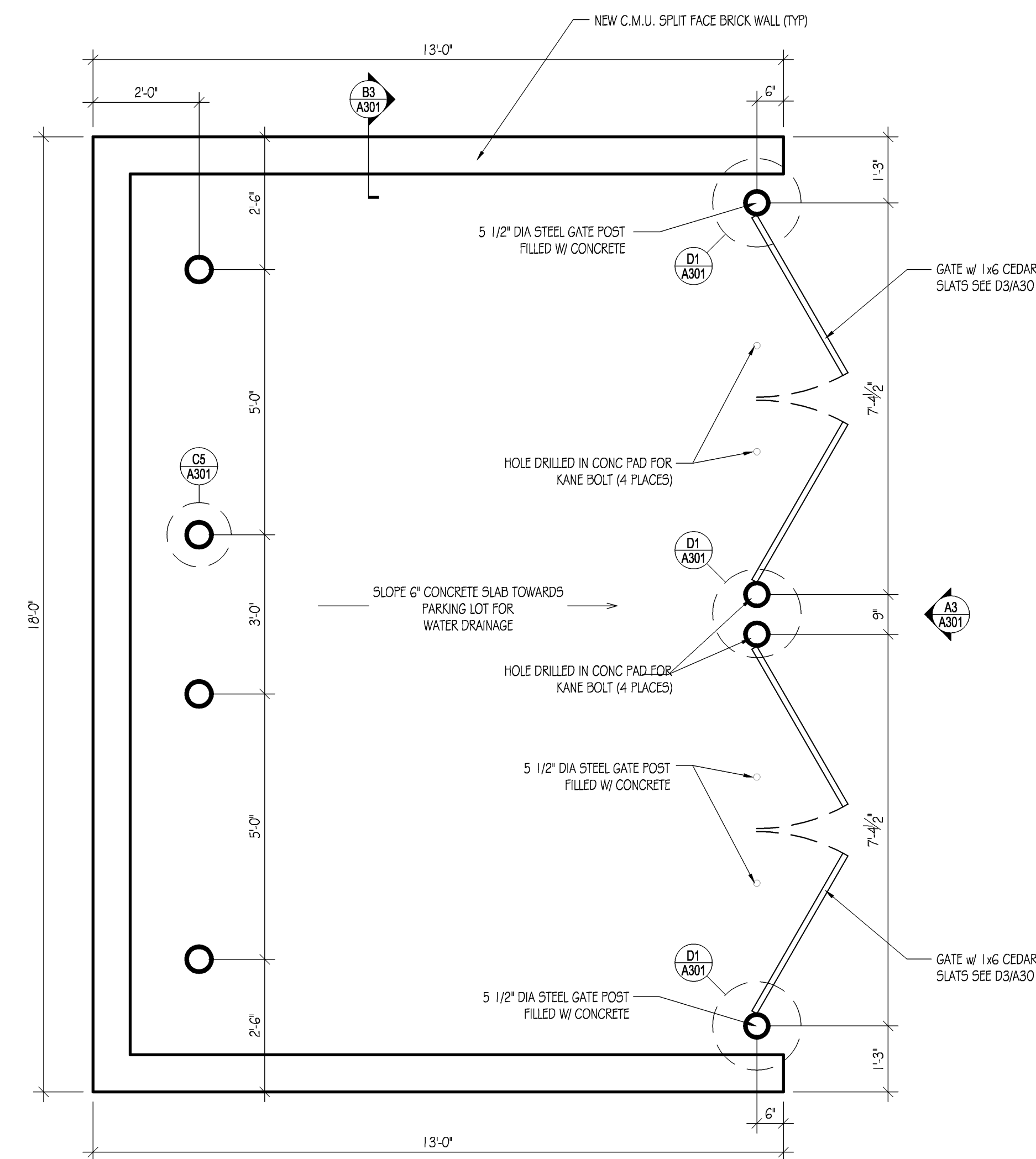
D4 GATE DETAIL - CANE BOLT
Scale: N.T.S.

EXTERIOR FINISH SCHEDULE			
Tag #	Description:	Location(s):	Notes:
CO-1	Manufacturer: GC Provided Material: Aluminum Color: White	Location(s): METAL RIDGE CAP	
P11	Manufacturer: Sherwin-Williams Material: Latex Paint Color: Caen Stone #SW0028 Finish: Satin	Location(s): TRASH ENCLOSURE - EXTERIOR	
P12	Manufacturer: Glidden Professional Material: Latex Paint Color: Deep Onyx #00NN 077000 Finish: Satin	Location(s): TRASH ENCLOSURE - INTERIOR, BOLLARDS, AND METAL DOOR FRAMES + HINGES	
S-1	Manufacturer: Material: WFP Cedar Planks Color: Western Red Cedar Finish/Seal: Natural # (EV) 15) WRCLA1	Location(s): CEDAR PLANKS	
CMU-3	Manufacturer: Material: Split Face C.M.U. Block Color: See Plan Finish: See Plan	Location(s): TRASH CORRAL WALLS	

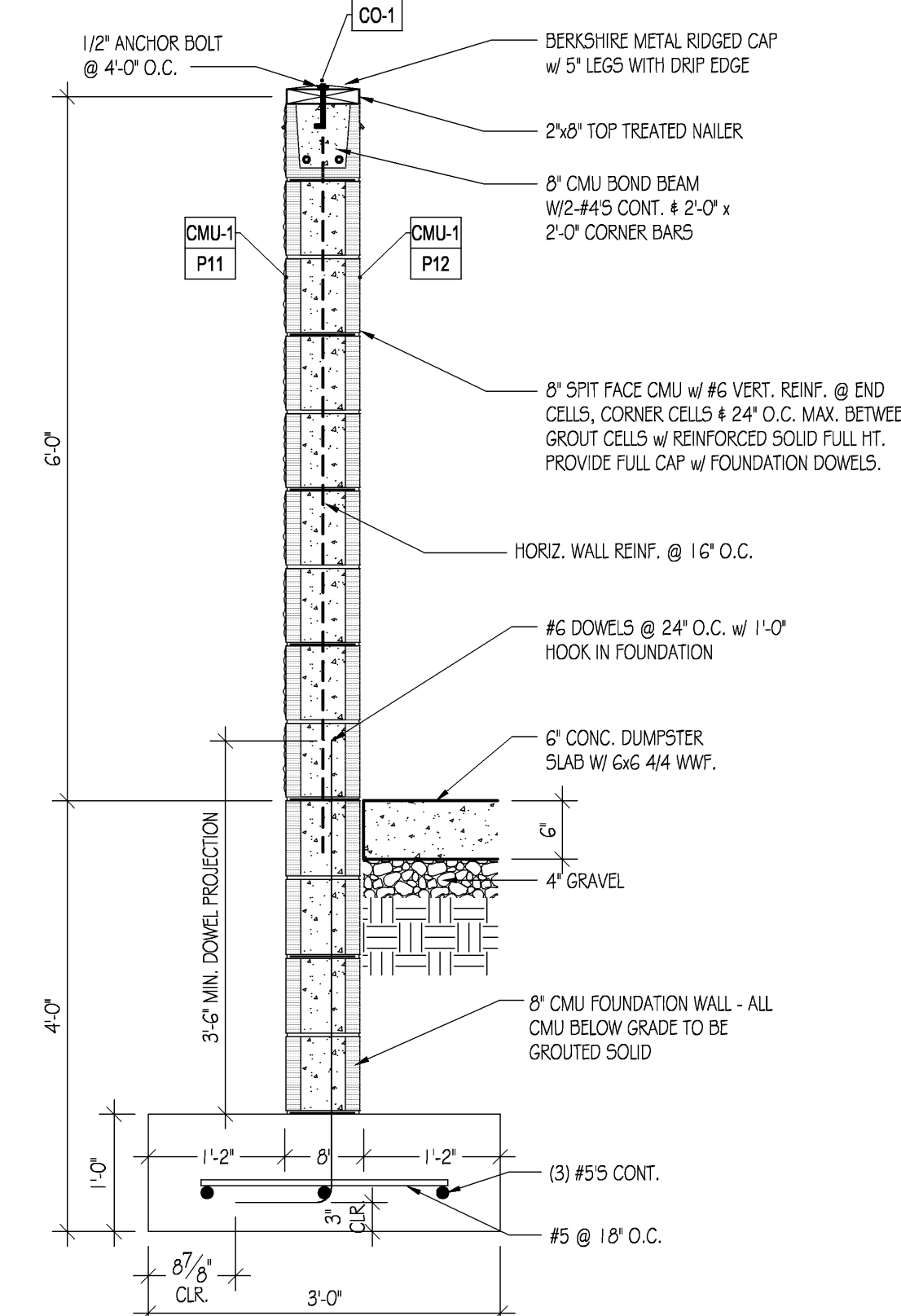
- GENERAL NOTES**
- GENERAL CONTRACTOR SHALL VERIFY DUMPSTER REQUIREMENTS WITH LOCAL AUTHORITIES AND COORDINATE WITH INDICATED DIMENSIONS.
 - GENERAL CONTRACTOR TO BUILD PER SITE PLAN LAYOUT.
 - DUMPSTER HARDWARE AND INSIDE DUMPSTER ENCLOSURE TO BE PAINTED WITH LOW GLOSS BLACK. SEE EXTERIOR FINISH SCHEDULE.



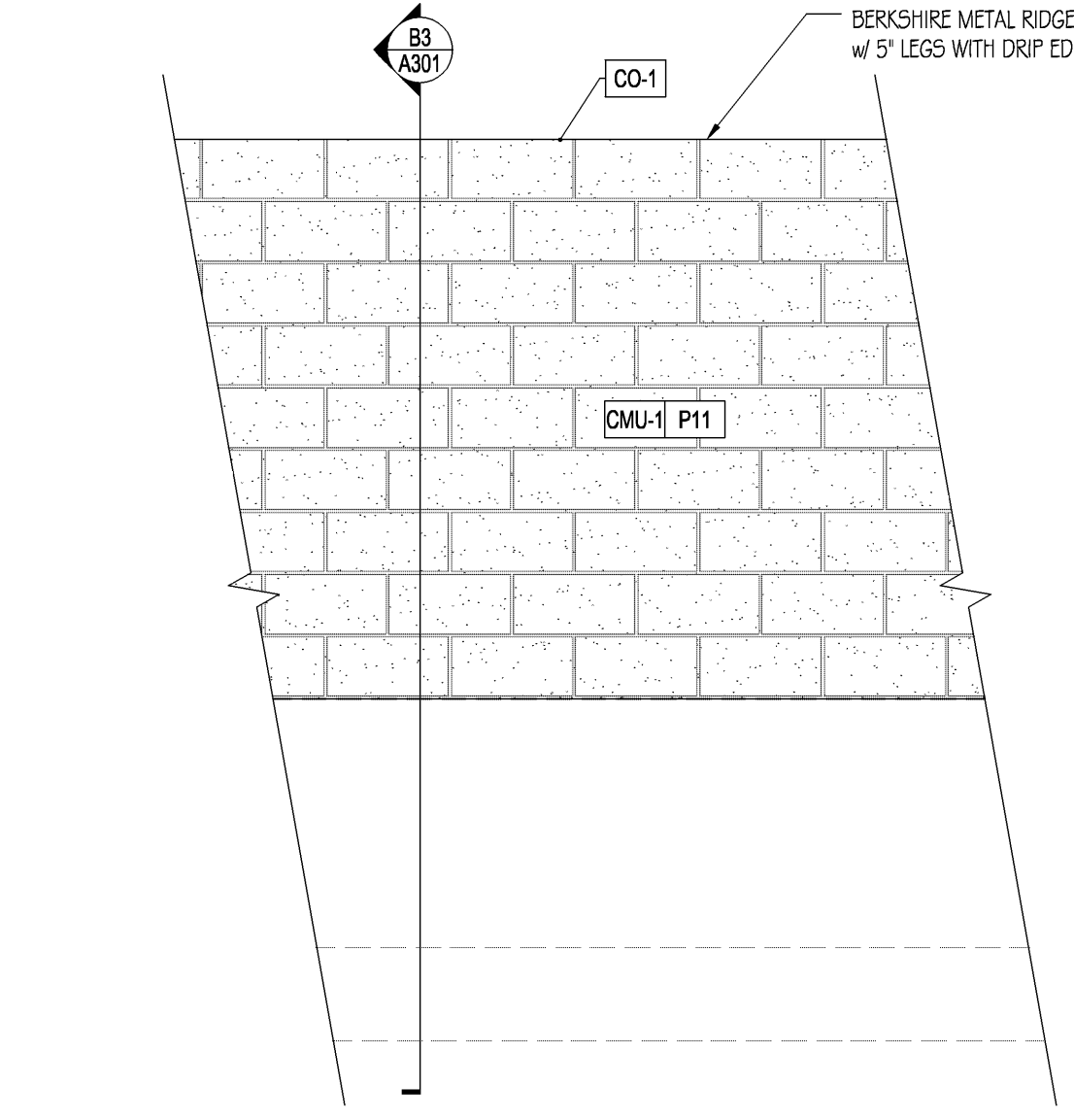
C5 TYPICAL TRASH ENCLOSURE ELEVATION
Scale: 1/2" = 1'-0"



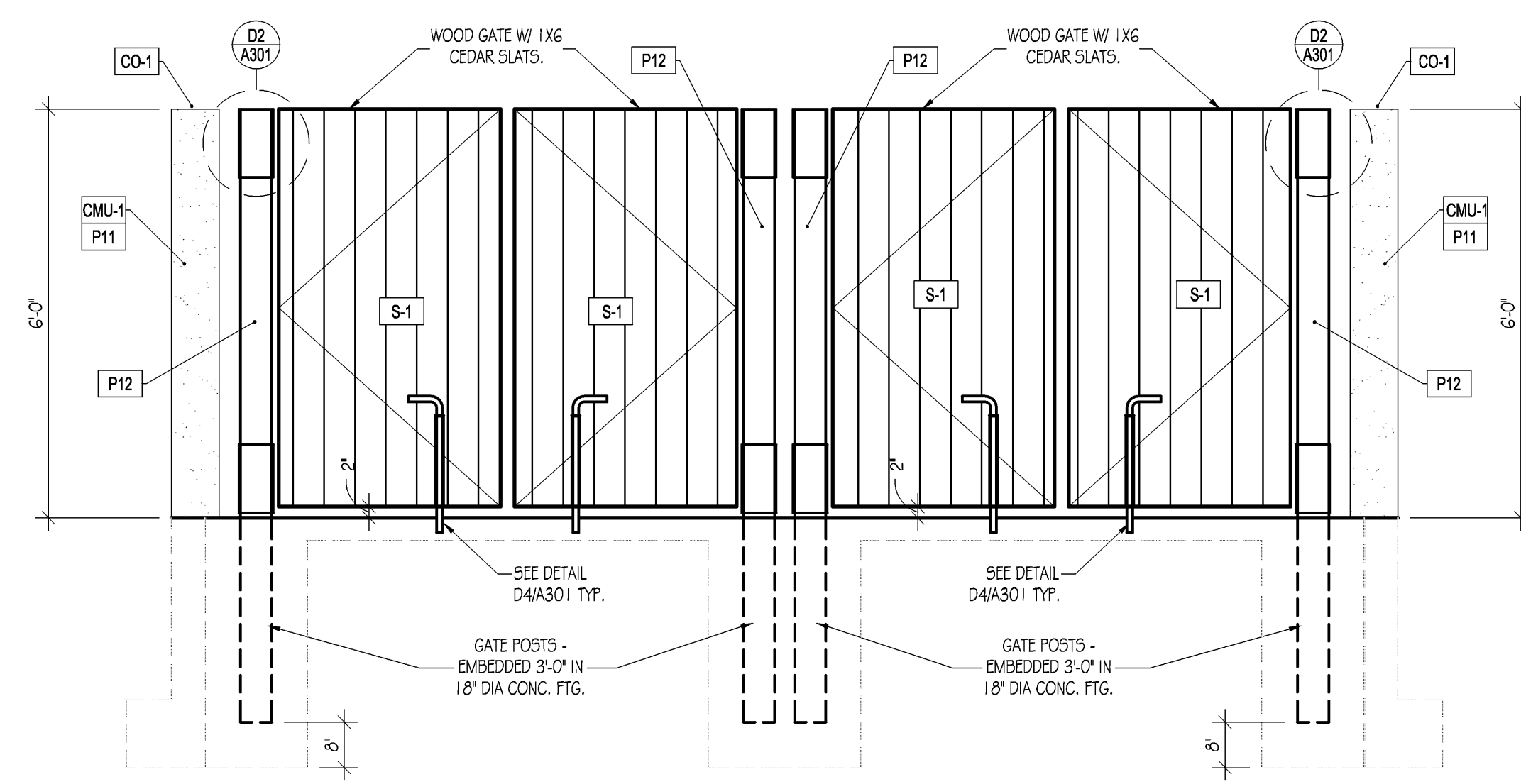
A1 ENLARGED DUMPSTER PLAN
Scale: 1/2" = 1'-0"



B3 TRASH ENCLOSURE WALL SECTION
Scale: 3/4" = 1'-0"

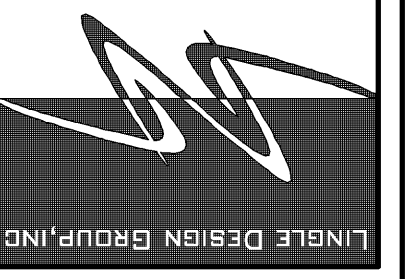


B4 TYPICAL TRASH ENCLOSURE ELEVATION
Scale: 1/2" = 1'-0"



A3 TRASH ENCLOSURE ELEVATION
Scale: 1/2" = 1'-0"

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WEST MAIN STREET
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PRELIMINARY
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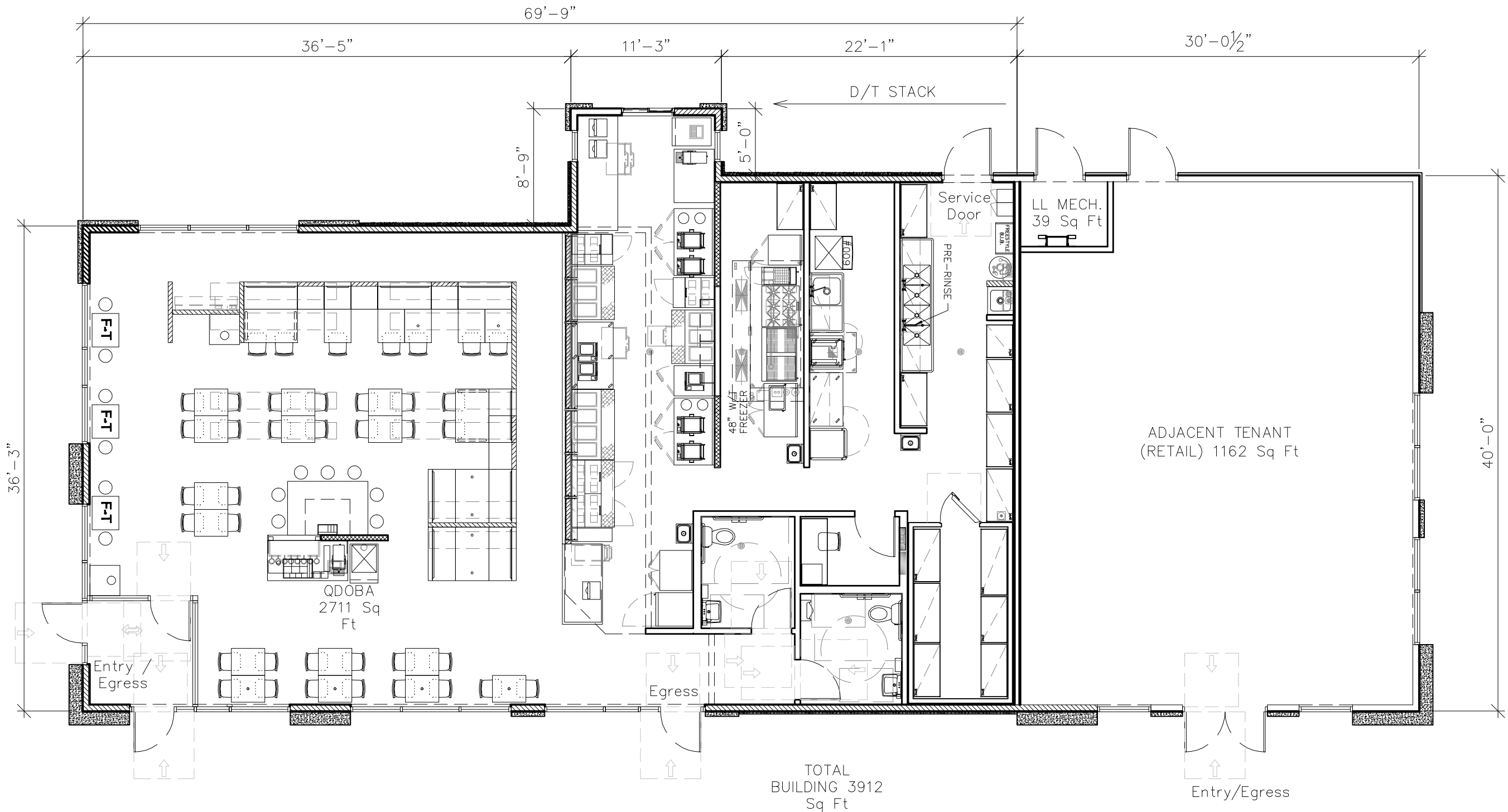
Gooba
MEXICAN GRILL
3883 East Grand River Avenue
Howell, Michigan 48843-8564

REVISIONS:	DESCRIPTION:
#	DATE: 08/09/13 ISSUED FOR PLANNING REVIEW

PROJECT NUMBER: 13-0448
DRAWN BY: JTC
CHECKED BY:

SHEET TITLE:
ENLARGED TRASH ENCLOSURE PLAN

SHEET NUMBER:
A301



PROJ. NO.: 13-0449
 DATE: 08/06/13
 SHEET # 002

Schematic
 2711 Sq Ft
 69 seats



OWNER / TENANT:
 Jonroe

SCALE:
 1/8" = 1'-0"



158 WEST MAIN ST,
 LENA, IL 61048

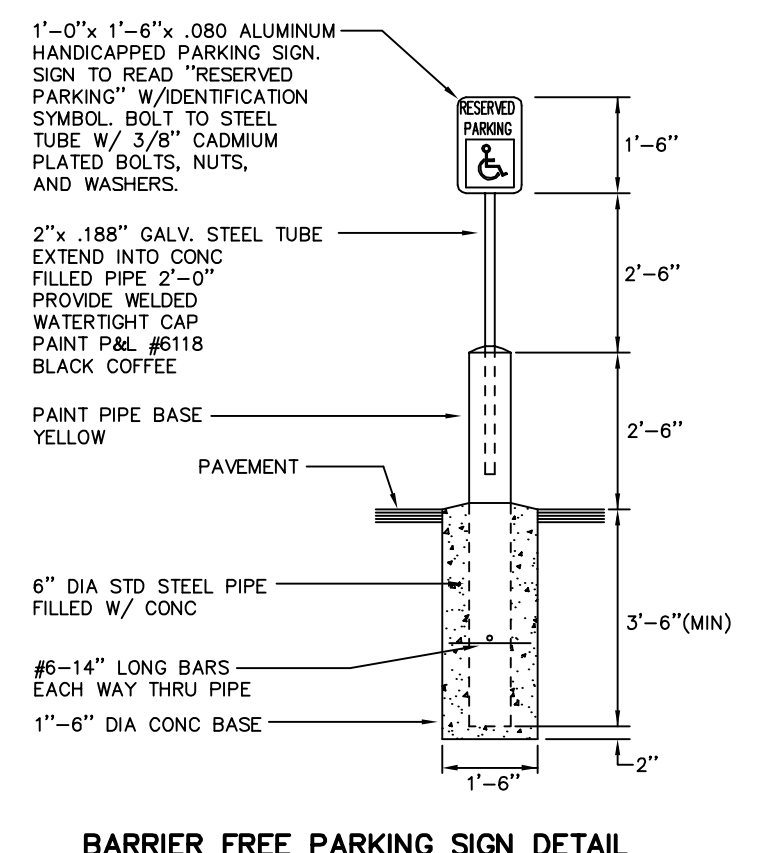
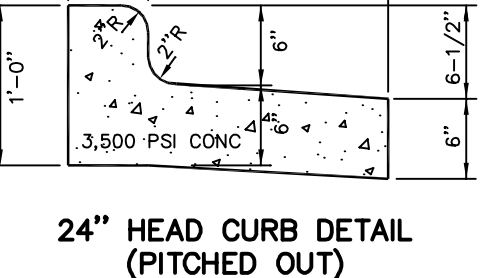
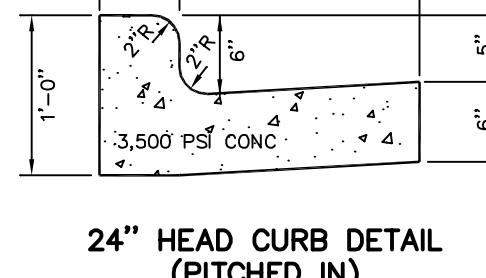
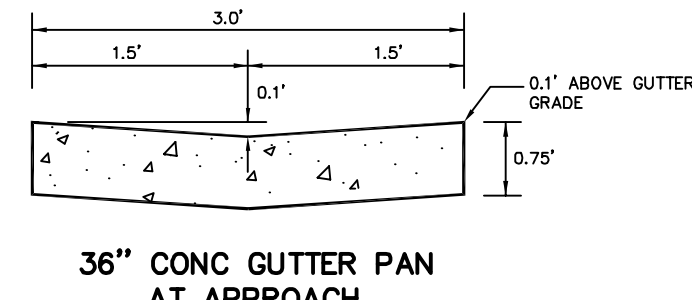
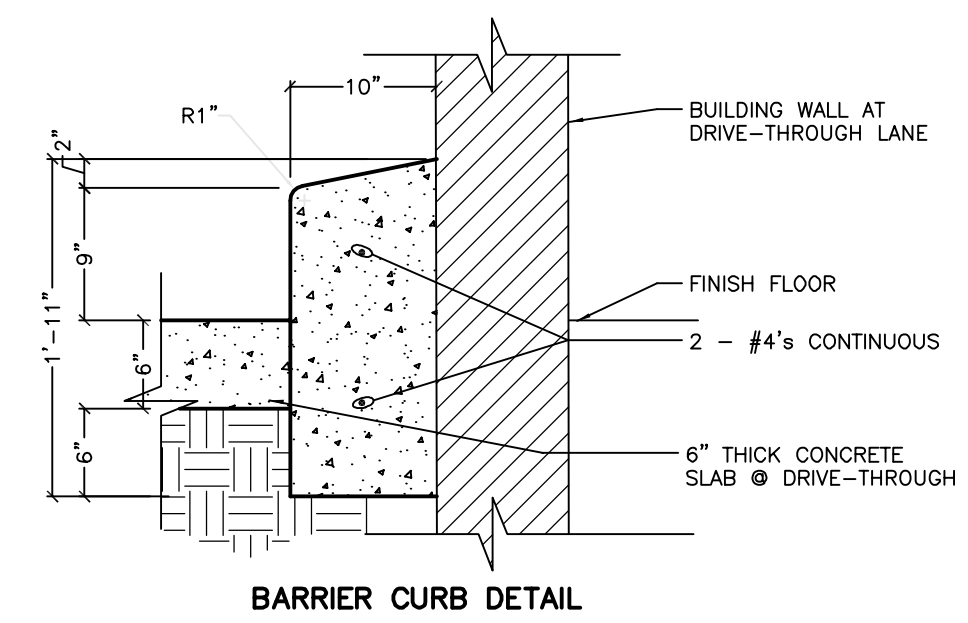
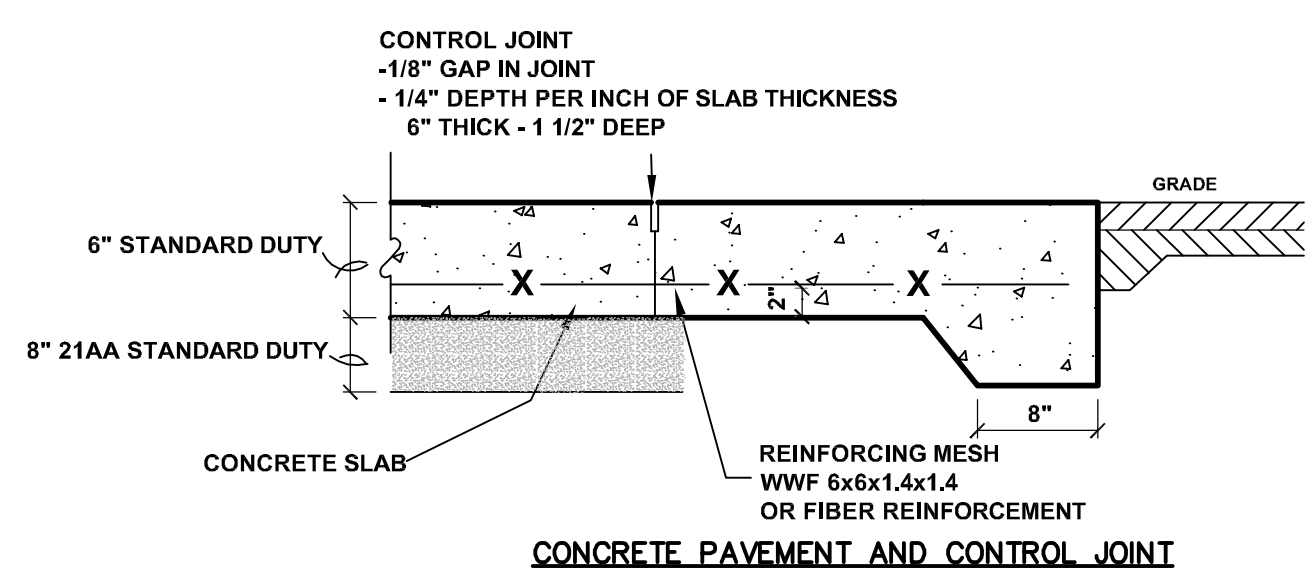
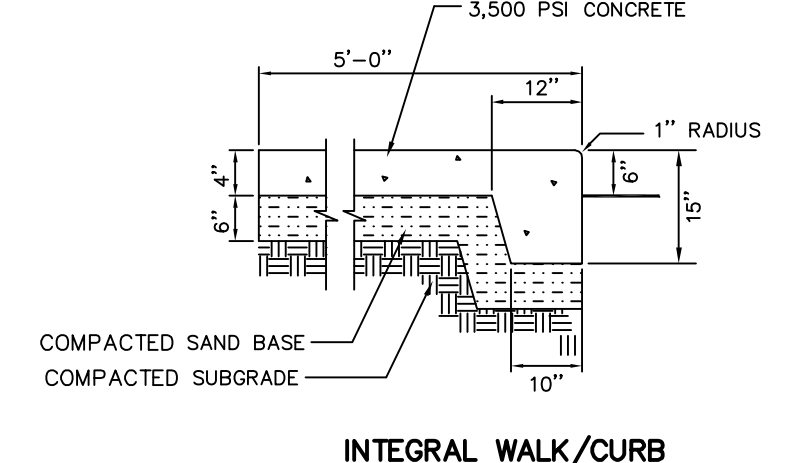
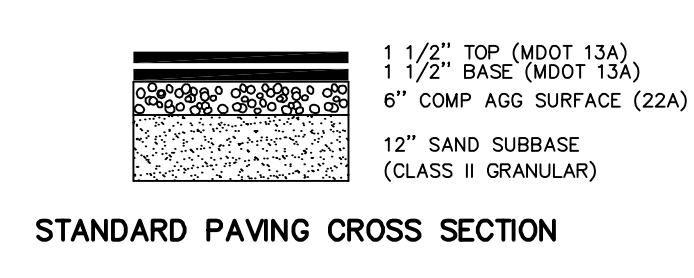
PH: 815-369-9155
 FAX: 815-369-4495
 WWW.LINLEDESIGN.COM

LINLE DESIGN GROUP



Know what's below.
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MUPUD



GENERAL NOTES:

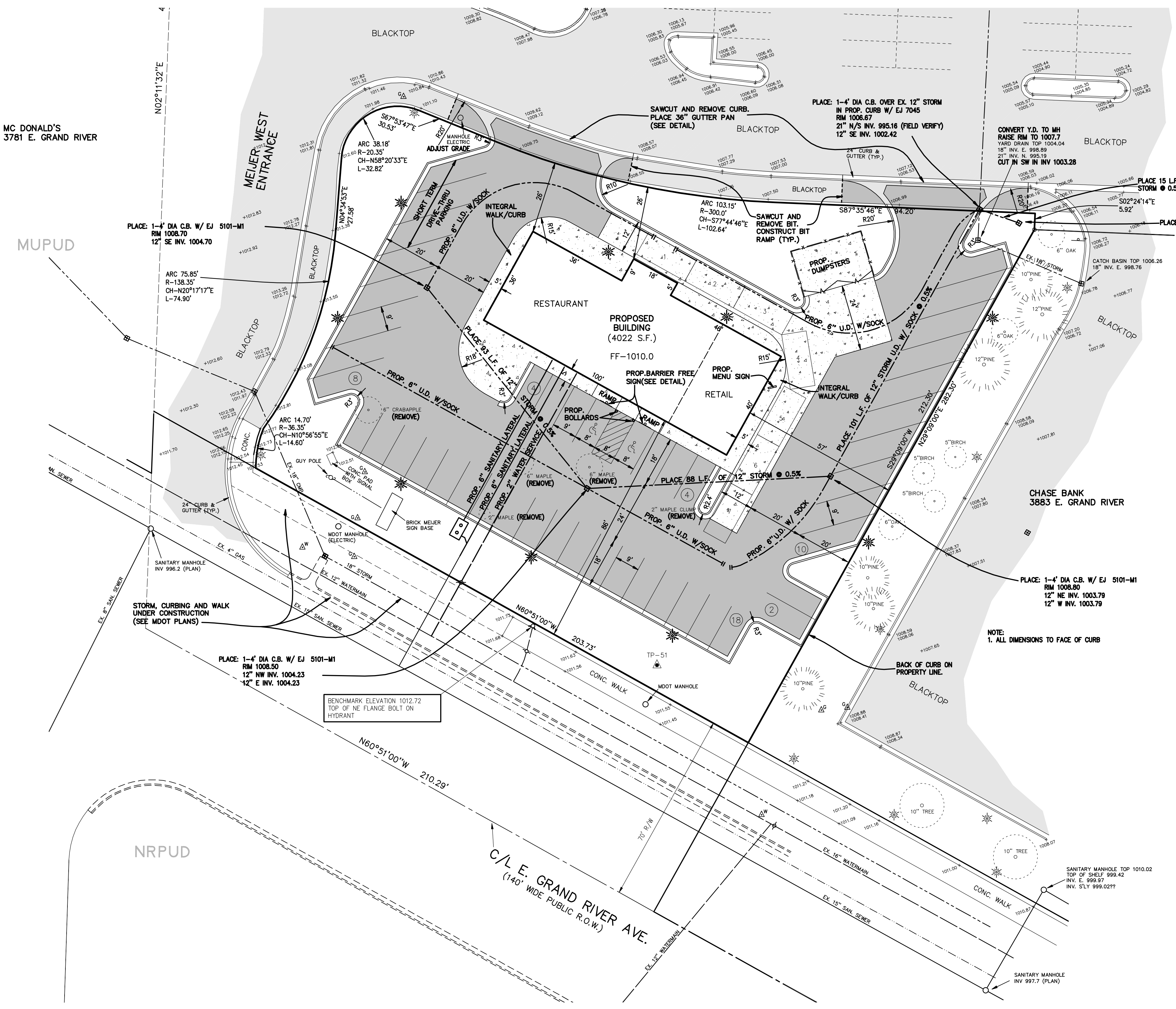
- Legal Description: Part of the SE 1/4, Section 5, T2N, R5E, Genoa Township, Livingston County, Michigan, described as Commencing at the SE corner of said Section 5; thence N02°11'26"E 848.49 feet along the East line of said SE 1/4 to the centerline of Grand River Avenue; thence N60°51'00"W 1027.33 feet along said centerline; thence N29°09'00"E 70.00 feet to the Northernly line of Grand River Avenue and the Place of Beginning of this description; thence N60°51'00"W 203.73 feet along the Northernly line of Grand River Avenue; thence Northernly 14.70 feet along a 36.35 foot radius curve to the right, the chord of which bears N10°56'55"E 14.60 feet; thence Northeastly 75.85 feet along a 138.35 foot radius curve to the left, the chord of which bears N20°17'17"E 74.90 feet; thence N04°34'53"E 27.58 feet; thence Northeastly 38.18 feet along a 20.35 foot radius curve to the right, the chord of which bears N58°20'33"E 32.62 feet; thence S67°53'47"E 30.53 feet; thence Southeastly 103.15 feet along a 300.00 foot radius curve to the left, the chord of which bears S77°44'46"E 102.64 feet; thence S87°35'46"E 94.20 feet; thence S02°24'14"W 5.92 feet; thence S29°09'00"W 212.30 feet to the place of beginning.
- This property contains approximately 0.85 acres.
- Existing Zoning - MUPUD Mixed Use PUD
Use: A restaurant is proposed. Neighboring properties includes - Retail, Banking and Restaurant
Building Setback & Height Requirements:
Front: 70' or 35' if no parking in front yard
Side: 15 feet
Rear: 50 feet
Height: Max. 35 feet and 2 stories
- Building & Lot Coverage
Building: 4022 sq. ft.
Impervious Area: 29,500 s.f. 73.5%
Lot Area: 0.85 Acre
- According to Soil Resource Report for Livingston County, the soils consist of Miami Loam (MoB).
- Parking Requirements:
Restaurant:
0.5 parking spaces per dining seat, 3 designated short term drive-thru, 2 RV/Semi spaces
Indoor Seating: 71 seats 36 parking spaces
Outdoor Seating: 16 seats 8 parking spaces
Drive-thru: 3 parking spaces
RV/Semi: 2 parking spaces
Total: 49 parking spaces
Retail:
1 parking space per 250 sf of Gross Floor Area (GFA)
GFA: 1210 sf 5 parking spaces
Total Required: 54 parking spaces
Parking Provided:
On-site: 46 parking spaces
Pending Agreement on Meijer property: 8 parking spaces (including RV/Semi spaces)
- Drive-thru Stacking Spaces
Required: 10 stacking spaces
Provided: 7 stacking spaces
- The storm sewer and detention basin for the PUD includes this as being developed. A 21" storm sewer pipe has been brought to the NE corner of the site for the Odoba storm water.

MC DONALD'S
3781 E. GRAND RIVER

MUPUD

MUPUD

CHASE BANK
3883 E. GRAND RIVER



PLACE: 1-4\"/>

PLACE: 1-4\"/>

PLACE: 1-4\"/>

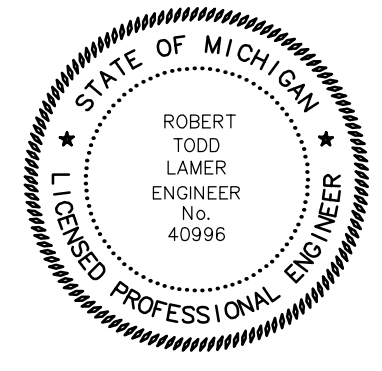
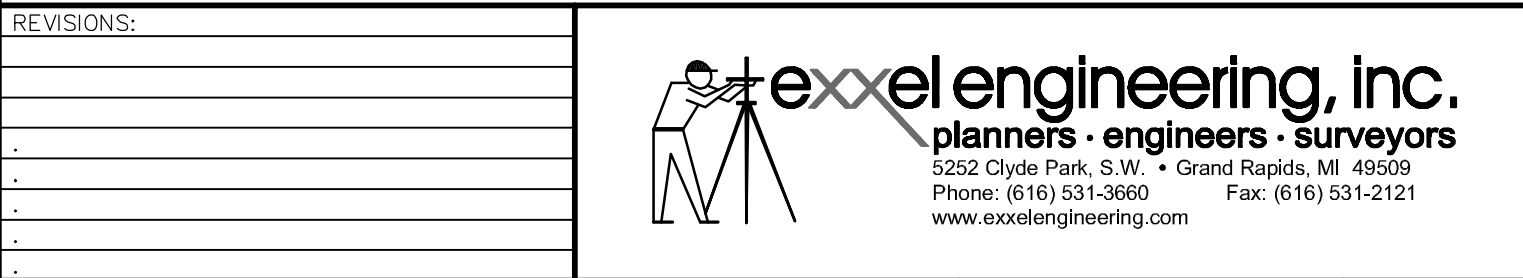
PLACE: 1-4\"/>

PLACE: 1-4\"/>

PLACE: 1-4\"/>

SITE DIMENSION AND UTILITY PLAN

QDOBA SITE PLAN - 3800 BLOCK OF EAST GRAND RIVER AVENUE FOR OUTLOT
FOR: SOUTHWIND RESTAURANTS, LLC
ATT: KEVIN EGNATUK
109 EAST BROADWAY
MT. PLEASANT, MI 48858
IN: PART OF THE SE 1/4, SECTION 5, T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



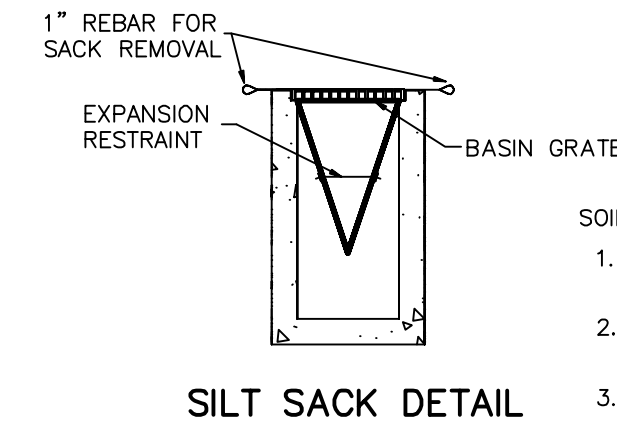
SCALE: 1" = 20'

drawing number	E F	DATE	7/31/2013	SHEET	1 of 2
APPROVED BY:	DDG	DATE:	7/31/2013		
FILE NO.:	131393E				



Know what's below.
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MUPUD

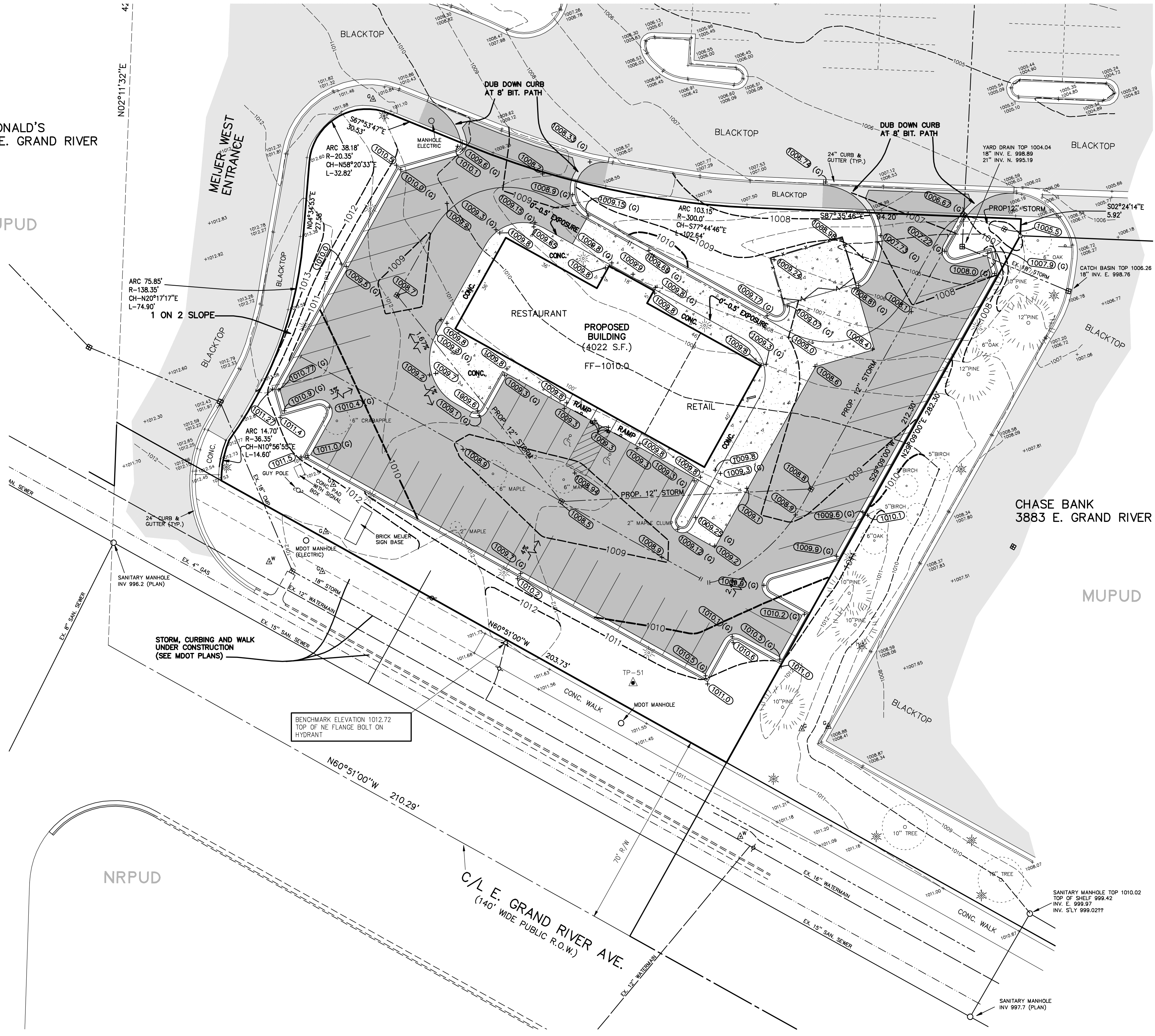


- SOIL EROSION CONTROL NOTES
1. Inspect and maintain all temporary soil erosion controls after each significant rainfall and until site has been permanently stabilized.
 2. All non-paved disturbed areas shall be restored with minimum 4" topsoil and seed.
 3. Protect all new storm inlets with sediment sacks

SILT SACK DETAIL

MC DONALD'S
3781 E. GRAND RIVER

MUPUD



CHASE BANK
3883 E. GRAND RIVER

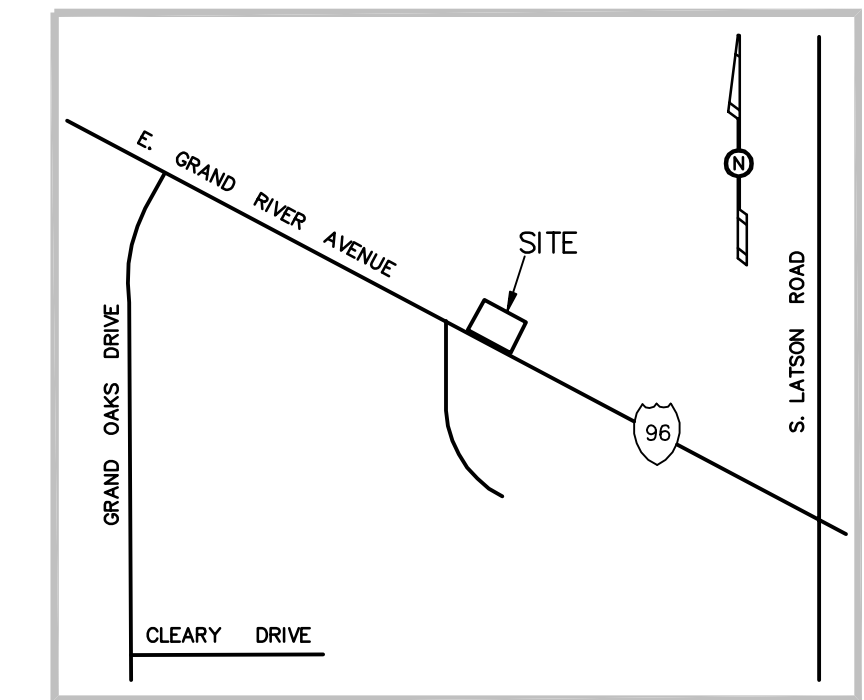
MUPUD

NRPUD

C/L E. GRAND RIVER AVE.
(140' WIDE PUBLIC R.O.W.)



SITE PHOTO



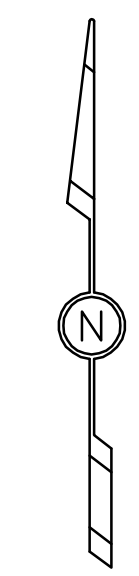
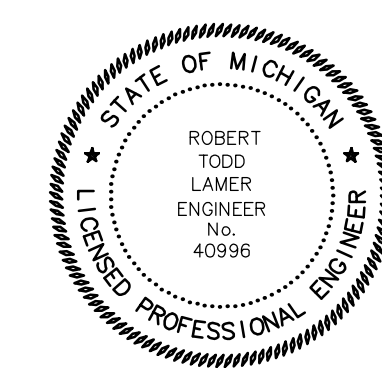
LOCATION MAP
NO SCALE

SITE GRADING PLAN

QDOBA SITE PLAN - 3800 BLOCK OF EAST GRAND RIVER AVENUE FOR OUTLOT

FOR: SOUTHWIND RESTAURANTS, LLC
 ATT: KEVIN EGNATUK
 109 EAST BROADWAY
 MT. PLEASANT, MI 48858

IN: PART OF THE SE 1/4, SECTION 5, T2N, R5E,
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



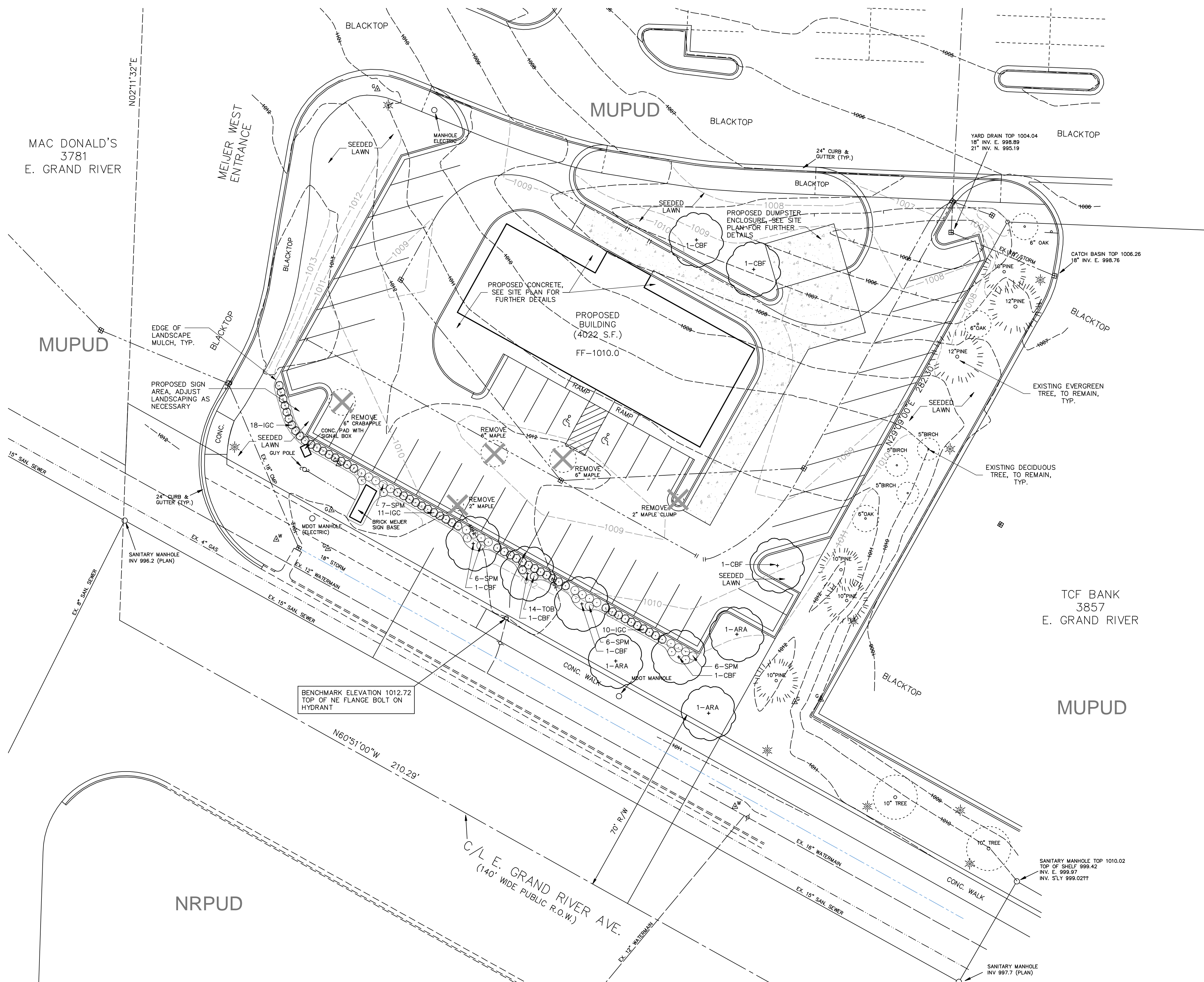
SCALE: 1" = 20'

exel engineering, inc.
 planners • engineers • surveyors
 5252 Clyde Park, S.W. • Grand Rapids, MI 49509
 Phone: (616) 531-3660 Fax: (616) 531-2121
 www.excelengineering.com

drawing number	E F	co.	map.	sec.	project	drawing
DRAWN BY:	JSD	PROJ. ENG.:	DDG			
APPROVED BY:	DDG	PROJ. SURV.:				
FILE NO.:	131393E	DATE:	7/31/2013			

SHEET 2 of 2

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LANDSCAPE CALCULATIONS

GRAND RIVER AVENUE (±21'± BACK OF MEIJER ENTRANCE CURB TO EAST PL)

REQUIRED GREENBELT WIDTH	20' WIDE, MINIMUM
REQUIRED CANOPY TREES	6 (1 PER 40')
REQUIRED EVERGREEN SHRUBS	72 (1 PER 2.5' OF PARKING)
PROPOSED WIDTH	22'
PROPOSED CANOPY TREES	6
PROPOSED EVERGREEN SHRUBS	78

EAST PROPERTY LINE (±192'± GREENBELT TO NE PROPERTY CORNER)

REQUIRED TYPE C BUFFER WIDTH	10' WIDE, MINIMUM
REQUIRED CANOPY TREES	10 (1 PER 20')
REQUIRED EVERGREEN SHRUBS	40 (4 PER 20')
EXISTING WIDTH	25' (SEE AGREEMENT WITH TCF BANK)
EXISTING CANOPY TREES	12
EXISTING EVERGREEN SHRUBS	0

NORTH PROPERTY LINE
NONE REQUIRED ALONG PRIVATE ACCESS DRIVES

WEST PROPERTY LINE
NONE REQUIRED ALONG PRIVATE ACCESS DRIVES

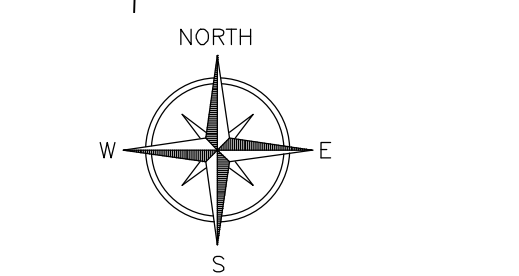
INTERIOR PARKING

PARKING PROVIDED	46 SPACES
REQUIRED CANOPY TREES	4 (1 PER 10 SPACES)
REQUIRED LANDSCAPE AREA	400 (100 SFT PER 10 SPACES)
PROPOSED CANOPY TREES	4
PROPOSED LANDSCAPE AREA	2684 (CORNERS AND DUMPSTER ISLAND)

LANDSCAPE NOTES:

- LANDSCAPE PLAN PREPARED BY: **Corey J. Broersma, LLA**
Licensed Landscape Architect
LA Solutions, LLC
161 Cambridge Ave, Holland, MI 49423 Ph: 616.393.6481
- CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE AND LOCAL PERMITS REQUIRED. ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY, STATE, AND LOCAL STANDARDS AND CODES.
- CALL "MISS DIG", 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY DIGGING.
- EXISTING UNDERGROUND UTILITIES ARE PLOTTED FROM ORIGINAL SITE DRAWINGS AND SITE TOPOGRAPHIC SURVEY PROVIDED BY EXCEL ENGINEERING, INC. EVERY ATTEMPT HAS BEEN MADE TO SHOW ALL UTILITY LINES WHERE THEY EXIST. CONTRACTOR SHALL USE EVERY PRECAUTION IN DIGGING SINCE ACTUAL UNDERGROUND UTILITIES MAY NOT BE AS SHOWN. CONTRACTOR SHALL MAKE HIMSELF THOROUGHLY FAMILIAR WITH ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY TRENCHING AND VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES.
- ALL GRADING, UTILITY, AND ANY IRRIGATION WORK SHALL BE COMPLETED PRIOR TO INSTALLATION OF PLANT MATERIAL, LANDSCAPE MULCH, OR SEED. THE LANDSCAPE CONTRACTOR SHALL COORDINATE WORK WITH ALL CONTRACTORS ON SITE TO MINIMIZE REDO OF COMPLETED LANDSCAPE WORK, AND DAMAGE TO PLANT MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN LAYOUT WORK. IF ANY DISCREPANCY EXISTS BETWEEN THE QUANTITIES, SIZES OR MATERIALS INDICATED ON THE PLAN AND SHOWN IN THE PLANT LIST, THE PLAN SHALL GOVERN.
- IT IS THE LANDSCAPE CONTRACTORS RESPONSIBILITY TO VISIT THE SITE PRIOR TO BID SUBMITTAL, TO BECOME FAMILIAR WITH EXISTING CONDITIONS AT THE SITE.
- THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR ROUGH GRADING IN ALL TURF AND LANDSCAPE AREAS.
- PRIOR TO BEGINNING WORK THE LANDSCAPE CONTRACTOR SHALL INSPECT AND ACCEPT ALL BASE GRADES. ANY DEVIATION FROM LINE AND GRADE INDICATED ON THE PLANS SHALL BE CORRECTED BEFORE PLACING ANY PLANTS OR TOPSOIL.
- CONTRACTOR SHALL NOTIFY ENGINEER IF AREAS OF POOR DRAINAGE OR OTHER UNUSUAL SUBSURFACE CONDITIONS ARE ENCOUNTERED DURING EXCAVATION FOR PLANTING FITS.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL SPECIFIED PLANT MATERIAL IN ACCORDANCE WITH ALL RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK" AS WELL AS THE METHODS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL TREE AND LANDSCAPE BEDS SHALL HAVE A MINIMUM 3" LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH FREE OF DELETERIOUS MATERIAL AND SUITABLE FOR TOP DRESSING TREES, SHRUBS, AND PERENNIALS.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINE GRADING AND PREPARATION OF ALL LAWN AND LANDSCAPE AREAS.
- AREAS TO RECEIVE SEED SHALL BE RIPPED AND SPREAD WITH TOPSOIL, 4" DEEP, TO PROVIDE A REASONABLY SMOOTH AND UNIFORM SURFACE.
- FERTILIZER AND/OR LIME SHALL BE APPLIED UNIFORMLY AND MIXED WITH THE SOIL DURING SEEDBED PREPARATION. IF A SOIL TEST IS NOT REQUIRED, FERTILIZER AND/OR LIME SHALL BE APPLIED ACCORDING TO THE SEED MANUFACTURERS RECOMMENDATIONS. IF A SOIL TEST IS REQUIRED, APPLY FERTILIZER AND/OR LIME IN ACCORDANCE TO THE SOIL REPORT.
- LOOSE ROCKS, ROOTS, AND OTHER OBSTRUCTIONS SHALL BE REMOVED FROM THE SURFACE SO THAT THEY WILL NOT INTERFERE WITH THE ESTABLISHMENT AND MAINTENANCE OF THE LAWN.
- LANDSCAPE CONTRACTOR SHALL SEED ALL EXISTING LAWNS AREAS DISTURBED BY CONSTRUCTION. REPAIR LAWN AREAS THAT HAVE REMAINED PARTIALLY INTACT, TOP DRESSING WITH SOIL, SOARIFYING, AND SEEDING TO FORM A SMOOTH EVEN LAWN, FREE OF BARE SPOTS, INDENTATIONS, & WEEDS.
- HYDRO-SEED REPAIRED LAWN AREAS WITH THE FOLLOWING GRASS SEED MIX AT A RATE OF 5 LB. PER 1,000 SFT., OR APPROVED EQUAL:

20% AWARD KENTUCKY BLUEGRASS	(85 PERCENT MINIMUM GERMINATION)
20% BARON KENTUCKY BLUEGRASS	(85 PERCENT MINIMUM GERMINATION)
20% RAMBO KENTUCKY BLUEGRASS	(85 PERCENT MINIMUM GERMINATION)
15% NASSAU KENTUCKY BLUEGRASS	(85 PERCENT MINIMUM GERMINATION)
15% NIGHTHAWK PERENNIAL RYE	(90 PERCENT MINIMUM GERMINATION)
10% CREEPING RED FESCUE	(85 PERCENT MINIMUM GERMINATION)
- LANDSCAPE CONTRACTOR SHALL ENSURE PROPER WATERING OF PLANTED AND SEEDED AREAS BEFORE, DURING, AND AFTER INSTALLATION INCLUDING THE WARRANTY PERIOD.
- THE LANDSCAPE CONTRACTOR SHALL WARRANT ALL PROVIDED AND INSTALLED PLANT MATERIAL FROM DEATH AND UNSATISFACTORY GROWTH FOR A PERIOD OF ONE YEAR FROM SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL REPLACE ALL DEAD PLANT MATERIAL IMMEDIATELY DURING THE PROPER PLANTING SEASON. PLANT MATERIAL MORE THAN 25% DEAD AT THE END OF THE WARRANTY PERIOD SHALL BE REPLACED. REPLACEMENTS SHALL BE LIMITED TO ONE PER PROVIDED AND INSTALLED PLANT UNLESS THE LANDSCAPE CONTRACTOR FAILS TO COMPLY WITH ANY OR ALL REQUIREMENTS.



TREE BRACING SCHEDULE

DECIDUOUS	EVERGREEN	BRACING TECHNIQUE
LESS THAN 2" CAL.	UNDER 6"	2 STAKES
2 1/2" OR GREATER CAL.	6"-8"	3 ANCHORS & CABLE

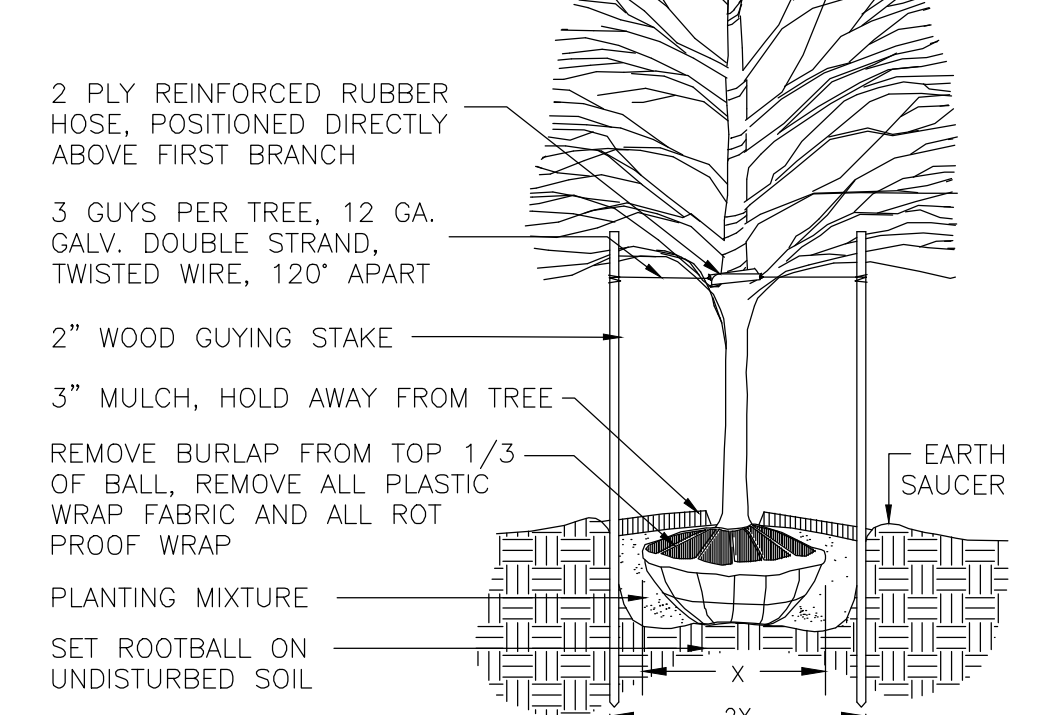
PLANT LIST

KEY	QUAN	DECIDUOUS TREE - BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	SYMBOL
ARA	3	ACRE RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME MAPLE	2.5" CAL. MIN.	B&B	(Symbol)
CBF	7	CARPINUS BETULUS 'FASTIGIATA'	FASTIGIATE EUROPEAN HORNBEEAM	2.5" CAL. MIN.	B&B	(Symbol)

KEY	QUAN	EVERGREEN SHRUB - BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	SYMBOL
IGC	39	ILEX GLABRA 'CHAMZIN' NORDIC	NORDIC INKBERRY HOLLY	24" HT. MIN.	30" O.C.	(Symbol)
TOB	14	THUJA OCCIDENTALIS 'BOBBAZAM'	BOBBAZAM GLOBE ARBORVITAE	24" HT. MIN.	30" O.C.	(Symbol)

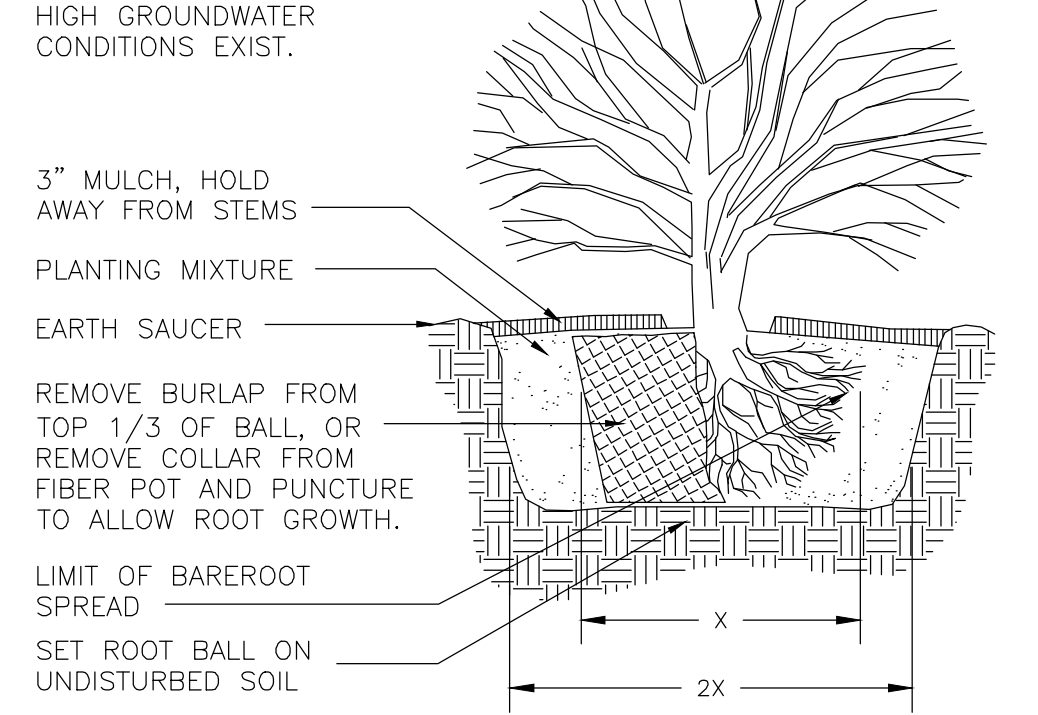
KEY	QUAN	DECIDUOUS SHRUB - BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	SYMBOL
SPM	25	SYRINGA PATULA 'MISS KIM'	MISS KIM MANCHURIAN LILAC	24" HT. MIN.	30" O.C.	(Symbol)

NOTES:
DO NOT CUT LEADER
TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IN NURSERY, UNLESS HIGH GROUNDWATER CONDITIONS EXIST.

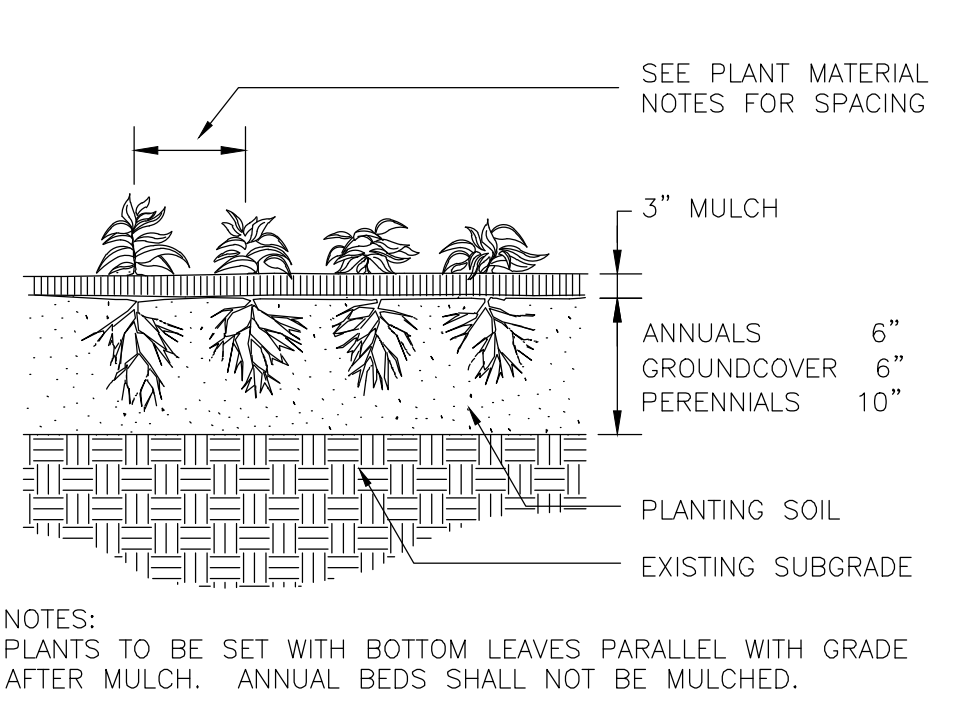


TREE PLANTING NOT TO SCALE

NOTES:
DO NOT TRIM EVERGREENS (APPLY WILT PROOF FIRST WINTER)
SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IN NURSERY, UNLESS HIGH GROUNDWATER CONDITIONS EXIST.



SHRUB PLANTING NOT TO SCALE



GROUND COVER & PERENNIAL PLANTING NOT TO SCALE



Know what's below.
Call before you dig.

QDOBA LANDSCAPE PLAN FOR OUTLOT

FOR: SOUTHWIND RESTAURANTS, LLC
ATT: KEVIN EGNATUK
109 EAST BROADWAY
MT. PLEASANT, MI 48858

IN: PART OF THE SE 1/4, SECTION 5, T2N, R5E,
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS:

8/7/13 FOR SITE PLAN SUBMITTAL

exel engineering, inc.
planners • engineers • surveyors
5252 Clyde Park, S.W. • Grand Rapids, MI 49509
Phone: (616) 531-3666 • Fax: (616) 531-2121
www.excelengineering.com

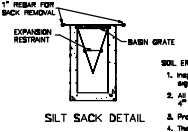
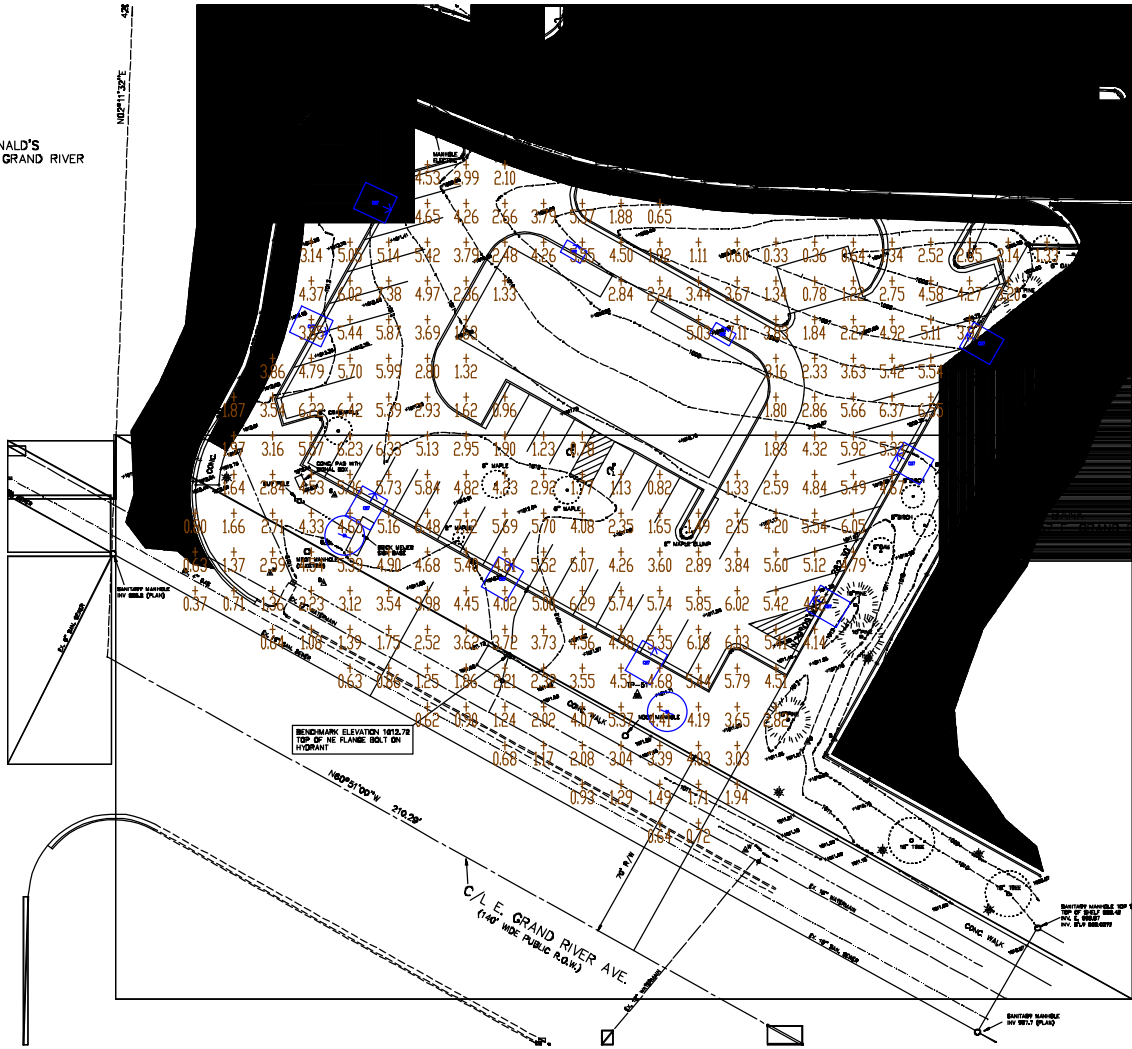
DRAWN BY: CJB
APPROVED BY: [Signature]
FILE NO.: 131393E

PROJ. ENG.: DDG
PROJ. SURV.:
DATE: 7/31/2013

SHEET 1 of 1

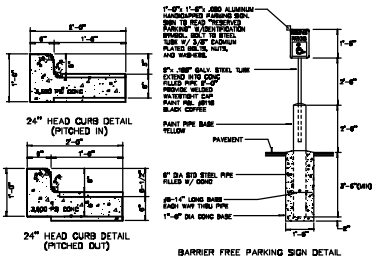
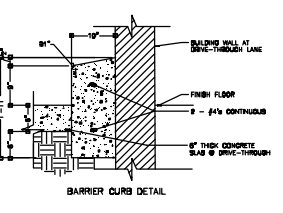
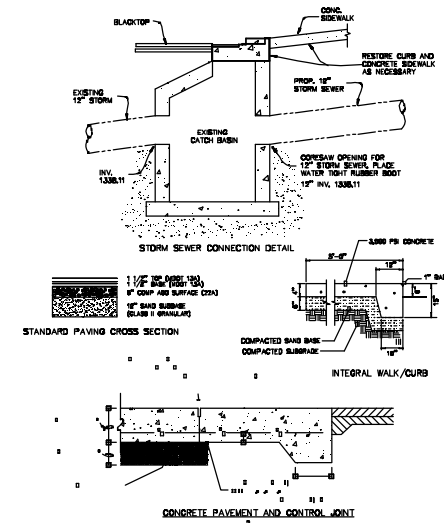


MAC DONALD'S
3781 E. GRAND RIVER

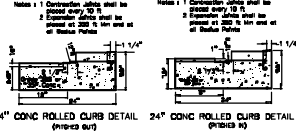


SOIL EROSION CONTROL NOTES

- Inspect and maintain all temporary soil erosion controls after each significant rainfall and until site has been permanently stabilized.
- All non-eroded disturbed areas shall be restored with minimum 2" topsoil and seed.
- Protect all new storm inlets with sediment socks.
- The soil is mostly sand.



- GENERAL NOTES**
- Legal Description: Lots 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12, Block 4, Section 16, Township 35N, Range 12W, City of Goshaw, Washtenaw County, Michigan, according to the plat thereof as recorded in Liber 1 of Plats, Page 10, Washtenaw County records.
 - This property contains approximately 2.1 acres.
 - Existing Zoning - C-2 Central Commercial District Building Setback & Height Requirements: none
Side: 5 feet
Front: 5 feet
Height: Max. 100 feet and 8 stories
 - Parking Requirements:
Restaurant:
1 per 100 s.f. = 59 spaces
5,838 s.f. / 100 = 59 spaces
Convenience/Gas (retail)
1 per 200 s.f. = 29 spaces
5,000 s.f. / 200 = 25 spaces
TOTAL required: 84 spaces
Parking Provided:
Standard spaces 77
Barrier free spaces 6
Drive thru spaces 4
Fuel island spaces 12
TOTAL 99
 - Final details for stormwater management, landscaping and lighting to be provided to City staff and the City's consultants for review, approval and permits.
a. Stormwater details are shown.
b. Refer to separate landscaping plan.
c. Refer to separate lighting plan.
 - HVAC units are located on the roof. Meters are on side of building or in the utility room.



DNF file created by LitePro 2030 on 8/6/2013 2:02:28 PM

CALCULATION SUMMARY										
AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	SPAC	GROUP	Avg	MAX	MIN	MAX/MIN	Avg/Min
Area #1	386.20x271.30ft	Grid #1 / H-H	219	1300	(+)	3.32	7.38	0.33	22.32	10.65

OdoBa Site - Howell, MI (0905) LUMINAIRE SCHEDULE						
TYP	SYMBOL	DESCRIPTION	LAMP	MOUNTING/BALLAST	LLF	LDY
C127		Cree ARE-EHI-3M-AA-12-D-UL-700-57K CONC GURD FROM 120 LED TYPE	(20) 20567 Lumens	271 Watts	0.94	8
SA		Aerotech DICK 4280 TYPE III 150 PSMH CAST METAL POST-TOP FITTER AND	(1) HPS150 1300 Lumens	HID	0.72	2
VW2		Cree SEC-ENG-3M-VW-06-D-UL-700-57K 60 LED TYPE III MEDIUM 700mA 4	(60) 9059 Lumens	133 Watts	0.94	2



SCALE: 1" = 20'

ODOBA SITE PLAN FOR OUTLOT

FOR: SOUTHWIND RESTAURANTS, LLC
ATT: KEVIN EGNATUK
109 EAST BROADWAY
MT. PLEASANT, MI 48858
IN: PART OF THE SE 1/4, SECTION 5, T2N, R5E,
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS:

excel engineering, inc.
PLANNING • ENGINEERING • MANAGEMENT

DATE: 7/28/2013
DRAWN BY: JTB
CHECKED BY: JTB
SCALE: 1" = 20'
SHEET 1 of 1

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION SPECIAL MEETING
PUBLIC HEARING
AUGUST 26, 2013
6:30 P.M.
MINUTES**

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present were Chairman Doug Brown, Barbara Figurski, James Mortensen, Dean Tengel, John McManus and Eric Rauch. Also present were Assistant Township Manager, Kelly VanMarter and Gary Markstrom of TetraTech.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: **Motion** by Barbara Figurski to approve the agenda as proposed. The motion was supported John McManus. **Motion carried unanimously.**

CALL TO THE PUBLIC: Chairman Brown made a call to the public at 6:33 p.m. No one wished to address the Planning Commission.

OPEN PUBLIC HEARING #1... Review of a special use application, impact assessment and site plan for proposed grading within the natural features setback and construction of a new 2,368 square foot office building located on the north side of Grand River Avenue, east of Kellogg Road, Sec. 14, petitioned by Dr. Brad Rondeau.

Piet Lindhout of Lindhout & Associates addressed the Planning Commission. Mr. Lindhout indicated that Dr. Bonine is agreeable to an easement. It is being drafted and the modifications have been discussed. Kelly VanMarter confirmed that the Township Attorney drafted the easement and it is progressing toward approval.

James Mortensen voiced his concern about the traffic flow issues. The easement will be shared ingress/egress. He supports that.

Mr. Lindhout indicated that they do not disagree with the Township Engineer's letter as it relates to REU's and parking. The environmental impact assessment should be changed to reflect that it's a medical office before it goes to the Township Board.

Planning Commission disposition of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.

C. Recommendation of Site Plan.

Motion by James Mortensen to recommend to the Township Board approval of the special use permit. This will permit grading into the setback area of the natural feature and will require restoration to its original condition following the construction. This is consistent with special land use standards in article 19 of the ordinance and will be condition upon completion of an ingress/egress easement with the property to the west subject to the agreement of the Township Attorney and recorded prior to issuance of the land use permit.

Support by Dean Tengel. 5 in favor of motion; 1 against motion. **Motion carried.**

Motion by Barbara Figurski to recommend to the Township Board approval of the environmental impact assessment, subject to:

1. The REU's in item G shall be corrected;
2. The grading in the buffer shall be restored to a natural state;
3. Appendix D will be added under line item L in regard to parking.

Support by Dean Tengel. 5 in favor of motion; 1 against motion. **Motion carried.**

Motion by James Mortensen to recommend to the Township Board approval of the site plan, subject to:

1. Compliance with the issues raised by the Township Engineer in his letter of August 5, 2013 which reference the REU's and the Brighton Fire Department letter of August 6, 2013;
2. The building materials, including the hardy board or vinyl reviewed this evening by the Planning Commission are acceptable and become Township property;
3. The 17 parking spaces proposed are acceptable;
4. The loading/unloading will be limited to curb carts;
5. Signage, as proposed, is not accepted by the Planning Commission and will be consistent with the ordinance or a variance will be sought from the Zoning Board of Appeals;
6. The proposed easement will be added to the site plan.

Support by John McManus. 5 in favor of motion; 1 against motion. **Motion carried.**

OPEN PUBLIC HEARING #2... Consideration of the Capital Improvement Plan.

Christina Galinac and Kelly VanMarter addressed the Planning Commission regarding the proposed capital improvement plan. Any questions regarding the roads on the HRC chart should be directed to Mike Archinal.

Chairman Brown voiced his concern about income streams and adjusting the CIP. Kelly VanMarter indicated that the CIP should be adjusted annually.

Christina Galinac made a full presentation of the CIP to the Planning Commission.

There have been no changes to the Township's participation in the gravel road improvements. The millage will only address paving roads.

Dean Tengel indicated that he thinks the paving of Crooked Lake Road should be included in the CIP, regardless of whether the millage passes. Kelly VanMarter explained that should the millage not pass, certain projects that the millage addresses could be placed on the CIP conceivably. The staff can review those lists and determine what should be moved over to the CIP list should the millage not pass.

Chairman Brown indicated he would like to see a sidewalk on Dorr Road. Kelly VanMarter indicated that should be added to the master plan. Dean Tengel agreed.

Planning Commission disposition of petition

A. Recommendation of Capital Improvement Plan.

Motion by John McManus to recommend to the Township Board that the Capital Improvement Plan 2013-2019 be adopted, subject to:

1. The inclusion of the paving of Crooked Lake Road, the light at Latson Road and the roundabout at Challis and Bauer Roads;
2. The inclusion of the sidewalk from the Township Hall to and over I-96.

Support by Dean Tengel. 3 voted in support of the motion. 2 voted against the motion. **Motion carried.**

Administrative Business:

- *Staff report*
- *Approval of August 12, 2013 Planning Commission meeting minutes. **Motion** by Barbara Figurski to approve the minutes as amended. The motion was supported by Dean Tengel. **Motion carried unanimously.***
- *Member Discussion*
- *Adjournment. **Motion** by John McManus to adjourn the meeting at 8:05 p.m. The motion was supported by Barbara Figurski. **Motion carried unanimously.***