

#### **AGENDA ITEM SUMMARY FORM**

**MEETING DATE:** 08/08/22

PREPARED BY: Matt Lonnerstater, AICP

AGENDA ITEM CONTENT: Special Approval Request PSP 22-08: 'Take 5 Oil Change' - 434 W. 12 Mile Rd.

**AGENDA ITEM SECTION:** Public Hearings

BUDGETED AMOUNT: N/A FUNDS REQUESTED: N/A

FUND: N/A

#### **EXECUTIVE SUMMARY:**

The applicant, Beacon Civil Engineering LLC, requests special use approval for a motor vehicle maintenance service facility (quick service oil change) known as 'Take 5 Oil Change'. The subject site is located on a vacant grass outlot at 434 W. 12 Mile Road (PIN 44-25-11-476-015), zoned M-1, Light Industrial. Motor vehicle maintenance service facilities are listed as a special use within the M-1 district per Section 10.329 of the Zoning Ordinance.

#### **RECOMMENDATION:**

Staff recommends that City Council deny special use request PSP 22-08 based upon the findings outlined in the staff report.



Date: July 21<sup>st</sup>, 2022

To: City of Madison Heights City Council From: Matt Lonnerstater, AICP – City Planner

Subject: Special Approval Request PSP 22-08 – 434 W. 12 Mile Road – 'Take 5 Oil Change'

#### Introduction

The applicant, Beacon Civil Engineering, LLC, requests special use approval for a motor vehicle maintenance service facility (quick service oil change) known as 'Take 5 Oil Change.' The subject site consists of a vacant grass outlot to the south of Lowe's at 434 W. 12 Mile Road (PIN 44-25-11-476-015). The property is zoned M-1, Light Industrial.

#### **Background and Application**

The applicant proposes to construct a quick-service oil change facility on a vacant grass outlot located on the north side of 12 Mile Road, immediately in front of the existing Lowe's. If the project is approved, the applicant would be required to divide the outlot into a separate parcel.

The subject property is zoned M-1, Light Industrial. Per Section **10.329** 'motor vehicle maintenance service facilities' (including oil change facilities) are permitted in the M-1 district as a special use, subject to use-specific standards; these use-specific standards are listed in full at the end of this report.

The applicant has submitted a preliminary site plan and concept color renderings for the project. As proposed, approximately a half-acre of the outlot would be improved with a three-bay, 1,418 square-foot quick-service oil change facility. Vehicular access is proposed off of the existing Lowe's access drive on the east side of the outlot. The preliminary building elevations primarily depict a stucco-façade, which does not meet the Zoning Ordinance's decorative masonry requirement for commercial structures (Section 10.401(u)).

Requests for special approval are subject to the following criteria, as outlined in Section 10.201(4):

The use shall be designed and located so that it is compatible with the surrounding properties, neighborhood and vicinity. At a minimum, this shall include:

- 1. Location of use(s) on site;
- 2. Height of all improvements and structures;
- 3. Adjacent conforming land uses;
- 4. Need for proposed use in specified areas of the city;
- 5. Conformance with future land use plans for the area as adopted by the planning commission;
- 6. Compatibility with the permitted principal uses allowed in the zoning district where the special approval use is requested.

Additional criteria for reviewing special uses are contained at the end of this report.

#### **Existing Zoning and Land Use**

The table below denotes existing adjacent land uses and zoning designations.

	Existing Land Use	Existing Zoning
Site	Vacant	M-1, Light Industrial
North	Commercial Retail (Lowe's)	M-1, Light Industrial
South (across 12 Mile)	Retail/Auto-Oriented Service	B-3, General Business
East	Commercial Retail	B-2, Planned Business
West	Commercial Retail	M-1, Light Industrial

The subject site is zoned M-1, Light Industrial, which is, "designed so as to primarily accommodate wholesale activities, warehouses, and industrial operations whose external, physical effects are restricted to the area of the district and in no manner affects in a detrimental way any of the surrounding districts."

The site located to the east of the 12 Mile Road/I-75 interchange. Adjacent land uses consist of regional commercial and auto-oriented uses, including Lowe's, Home Depot, BJ's Wholesale, fast-casual restaurants and drive-throughs, and auto-service uses.





Adjacent Auto-Service Uses (across 12 Mile Rd; Looking East)



#### Future Land Use and Master Plan

The table below denotes adjacent future land use designations as contained within the 2021 Madison Heights Master Plan.

	Future Land Use
Site	Mixed Use Innovation
North	Mixed Use Innovation
South (across 12 Mile)	Commercial
East	Commercial
West	Mixed Use Innovation

The future land use designation of the subject site is 'Mixed Use Innovation'. Per the Master Plan, the Mixed Use Innovation designation is intended to, "encourage a mix of office, service, commercial and light industrial uses." Further, the Mixed Use Innovation designation promotes uses that demonstrate connectivity within the district, to the mixed use commercial core, and to other commercial areas.

#### **Use-Specific Standards**

Section **10.319(2)** of the Zoning Ordinance contains use-specific standards for motor vehicle maintenance service facilities within the business and industrial zoning districts. Based on the proposed concept plan, the project is in general compliance with these use-specific standards.

However, as previously noted, the building materials depicted on the elevations do not satisfy the City's decorative masonry requirement for commercial structures. Additional site plan deficiencies, including the absence of a bicycle rack, proper dimension labels, and easement dedications, would need to be addressed during the site plan review stage.

#### **Staff Analysis**

Per Section 10.201(4)(c), one criteria for the evaluation of special uses within the City is the, "need for the proposed use in specified areas of the city." Staff has concerns about the proliferation of auto-service uses in close proximity to one another. Staff notes that there are three express auto repair/oil change immediately to the south of the subject property across 12 Mile Road (Midas, Auto Xperts, and Uncle Ed's Oil Shoppe), in addition to a car wash (Auto Bath America). Further, staff notes that there are at least eight quick-service auto repair/express oil change businesses with Madison Heights addresses within two miles of the proposed site, listed below:

- 1. Midas: 385 W. 12 Mile Rd. (0.06 miles)
- 2. Auto Xperts: 433 W. 12 Mile Rd. (0.08 miles)
- 3. Uncle Ed's Oil Shoppe: 465 W. 12 Mile Rd. (0.1 miles)
- 4. Major Oil Detailing & Repair: 27795 John R Rd. (0.6 miles)
- 5. Instant Kwik Lube: 26700 John R Rd. (1.11 miles)
- 6. Majic Quick Lube: 31371 John R Rd (1.28 miles)
- 7. Quick & Easy Oil Change: 32350 John R Rd. (1.8 miles)
- 8. Fast Change Oil: 32822 John R Rd. (1.9 miles)

Further, staff does not find the proposed use to be consistent with the 'Mixed Use Innovation' future land use designation for the property in that it does not further contribute to or promote an appropriate mix of office, commercial, and light industrial uses.

#### **Findings and Recommendation**

Staff offers the following findings for City Council consideration:

- 1. The applicant requests special use approval for a motor vehicle maintenance service facility (quick service oil change) known as 'Take 5 Oil Change' at 434 W. 12 Mile Road. The site is zoned M-1, Light Industrial.
- 2. The proposed oil change facility is compatible with existing adjacent uses, which include other auto service uses, regional commercial, and restaurant establishments, but is not consistent with the intent of the site's M-1, Light Industrial zoning.
- 3. The proposed use is not completely aligned with the site's 'Mixed Use Innovation' future land use designation in that it does not further contribute to or promote an appropriate mix of office, commercial, and light industrial uses. The use is not consistent with special use criteria Section 10.201(4)(c)5, "conformance with future land use plans for the area as adopted by the planning commission."
- 4. The proposed use is not consistent with special use criteria Section 10.201(4)(c)4, "the need for the proposed use in specified areas of the city," in that it will further proliferate the amount of quick-service auto facilities within a small area of the city, including what would amount to a fourth oil change facility along this small stretch of W. 12 Mile Road and ninth facility within two miles of the subject site.
- 5. The proposed use generally satisfies the special use approval review standards and criteria listed in Section **10.319(2)**, but does not satisfy the City's commercial architectural requirements.
- 6. The Site Plan Review Committee (SPRC) reviewed the proposed special approval request at their July 13<sup>th</sup>, 2022 meeting and expressed concerns regarding the amount of quick-service auto repair/maintenance facilities within the area.

Based on these findings, staff recommends that City Council deny special use request PSP 22-08.

If City Council should move to approve the requested special use, staff recommends adding the following condition: the applicant shall submit revised building elevations for site plan review that substantially comply with the City's commercial architectural requirements, Section 10.401(u).

#### **Next Step**

After the public hearing and discussion, City Council may take action on the requested special use. Any motion shall include concise findings based upon the special approval review standards and criteria, Section 10.201(4).

#### **Pertinent Zoning Ordinance Sections**

#### Section 10.201 – Special Approval Use Review Procedures and Requirements

- (4) Review standards and criteria. The city council shall consider the following standards and criteria in their review of all special approval use requests:
  - (a) Site plans submitted for special approval uses shall be prepared in conformance with and contain all information as outlined in Section 10.514. Site Plan Review.

- (b) All design standards or criteria imposed on specific special approval uses elsewhere in this Ordinance shall be met.
- (c) The use shall be designed and located so that it is compatible with the surrounding properties, neighborhood and vicinity. At a minimum, this shall include:
  - 1. Location of use(s) on site;
  - 2. Height of all improvements and structures;
  - 3. Adjacent conforming land uses;
  - 4. Need for proposed use in specified areas of the city;
  - 5. Conformance with future land use plans for the area as adopted by the planning commission; and
  - 6. Compatibility with the permitted principal uses allowed in the zoning district where the special approval use is requested.
- (d) Ingress/egress to the use shall be controlled to assure maximum vehicular and pedestrian safety, convenience and minimum traffic impact on adjacent roads, drives and uses including, but not limited to:
  - 1. Reduction in the number of ingress/egress points through elimination, minimization and/or consolidation of drives and/or curb cuts;
  - 2. Proximity and relation to intersections, specifically with regard to distance from drive(s) to intersection(s);
  - 3. Reduction/elimination of pedestrian/vehicular traffic conflicts;
  - 4. Adequacy of sight distances;
  - 5. Location and access of off-street parking;
  - 6. Location and/or potential use of service drives to access multiple parcels, reducing the number of access points necessary to serve the parcels.
- (e) Screening shall be provided along all property lines, where council determines such screening is necessary to minimize impact of the use on adjacent properties or uses.
- (f) The use shall be properly served by utilities.
- (g) The use shall not have an adverse effect on the environment beyond the normal affects of permitted principal uses in the same zoning district and shall not result in an impairment, pollution, and/or destruction of the air, water, and natural resources.
- (h) The use shall be specifically scrutinized for conformance with the performance standards outlined in section 10.509 of this Ordinance.
- (i) The proposed use shall be designed as to location, size, intensity, site layout, and periods of operation to eliminate any possible nuisances which might be noxious to the occupants of any other nearby properties. The use shall not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive smoke, fumes, glare, noise, vibration, odors, and adverse environmental impacts.
- (j) The proposed use does not impose an unreasonable burden upon public services and utilities in relation to the burden imposed by permitted principal uses in the same zoning district.
- (k) The city council may impose conditions in granting special approval that it deems necessary to fulfill the spirit and purpose of this Ordinance. The conditions may include those necessary to ensure that public services and facilities affected by a proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity, to protect the natural environment and conserve natural resources and energy, to ensure compatibility with adjacent

uses of land, and to promote the use of land in a socially and economically desirable manner. Conditions imposed shall:

- Be designed to protect natural resources, the health, safety and welfare, as well as the social and
  economic well-being of those who will use the land use or activity under consideration, residents
  and landowners immediately adjacent to the proposed land use or activity, and the community
  as a whole.
- 2. Be related to the valid exercise of the police power and purposes that are affected by the proposed use or activity.
- 3. Be necessary to meet the intent and purpose of the zoning regulations; be related to the standards established in this Ordinance for the land use or activity under consideration (if applicable); and be necessary to ensure compliance with those standards.
- 4. Provide adequate safeguards as deemed necessary for the protection of the general welfare and individual property rights, and for ensuring that the intent and objectives of this Ordinance will be observed. The breach of any condition, safeguard or requirement, and the failure to correct such breach within 30 days after an order to correct is issued by the city shall be reason for immediate revocation of the special approval. Conditions and requirements stated as a part of special use permit authorizations shall be continuing obligations of the holders of such permits and are binding upon their heirs and assigns and upon any persons taking title to the affected property while such special use permit is in effect.
- (I) The discontinuance of a special use after a specified time may be a condition to the issuance of the permit. Renewal of a special use permit may be granted after a review and determination by the city council that continuing private need and public benefit will be served by such renewal. Renewal applications shall be in accord with standards and requirements in effect at the time that the renewal is requested.

#### Sec. 10.329 – M-1 Uses Permissible on Special Approval

- (6) Motor vehicle heavy and light repair facilities and/or motor vehicle maintenance service facilities subject to the applicable requirements of subsection 10.319(2).
  - Sec 10.319(2) Gasoline service stations and/or motor vehicle light repair facilities and/or motor vehicle maintenance service facilities, subject to the following:
  - (a) One hundred forty feet of street frontage on the lot proposed for the gasoline filling station shall be provided on the principal street serving the station.
  - (b) The lot shall contain not less than 14,000 square feet of lot area.
  - (c) The lot must be located on the edge of the district (where the abutting zoning district on the frontage is nonresidential) so as not to disrupt pedestrian movement within the district.
  - (d) All buildings shall be set back not less than 40 feet from all street right-of-way lines.
  - (e) Gasoline pumps, air and water hose stands and other appurtenances shall be set back not less than 15 feet from all street right-of-way lines.
  - (f) Driveway widths entering the filling station shall have a maximum width of 35 feet. Curb openings for each driveway shall not exceed 50 feet in length.
  - (g) Curb cuts shall be no closer than ten feet to any adjoining property and shall be no closer than 35 feet to any corner of the intersecting street right-of-way lines. Any two driveways shall be separated by an island at least 20 feet long.
  - (h) The angle of intersection of any driveway shall not be less than 60 degrees unless acceleration or deceleration lanes are provided.

- (i) Curbs in accord with standard city specifications shall be constructed on all streets adjacent to the gasoline filling station site.
- (j) Sale of alcoholic beverages from a structure wherein gasoline service stations are operated is strictly prohibited except in such structures where there is a masonry firewall between the location selling alcoholic beverages and the gasoline service station and there is a distance of 500 feet between the entrance of each establishment.
- (k) The owner and/or operator of a gasoline service station and/or motor vehicle maintenance service facility shall not permit disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced to be parked for longer than 72 hours on the premises. Further, such disabled vehicles or vehicles waiting for repair or service shall be parked within an enclosed building. All repair work of any nature shall be done within an enclosed building only.
- (I) Motor vehicle light repair facilities established and/or uses expanded to include motor vehicle light repairs shall completely screen all motor vehicles waiting for repairs and/or maintenance from view from any direction by an eight-foot poured concrete screen wall. All parcels which do not contain corner lots must maintain the required front yard setback per ordinance. All parcels which contain a corner lot shall contain screened walls which comply with side yard setbacks as well as front yard setbacks. Screen gates must be installed to continue the enclosure of the screened area. Disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced shall not be parked for longer than 72 hours on the premises. Further, all vehicles waiting for repair shall be screened from view. All repair work of any nature shall be done in an enclosed building only.
- (m) All owners and/or operators of gasoline service stations and/or light repair facilities and/or motor vehicle maintenance service facilities that are in existence on the effective date of this Ordinance, shall not permit disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced to be parked for longer than 72 hours on the premises. All repair work of any nature shall be done within an enclosed building only.

#### NOTICE OF PUBLIC HEARING

Notice is hereby given that the City Council for the City of Madison Heights will hold a public hearing on Monday, August 8<sup>th</sup>, 2022 at 7:30 p.m. in the Training Room at Fire Station #1 located at 31313 Brush Street, Madison Heights, Michigan 48071 to consider the following special approval request:

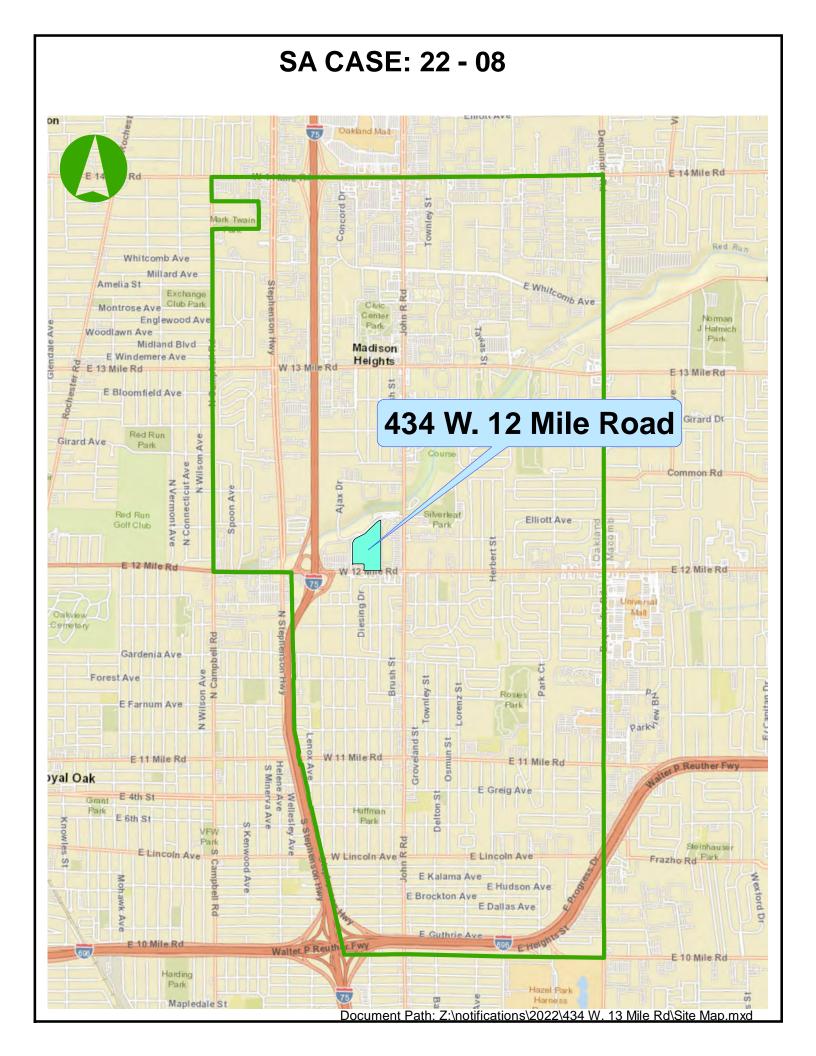
#### Case # PSP 22-08

The applicant, Beacon Civil Engineering, LLC, requests Special Approval from City Council under Section 10.329 of the Madison Heights Zoning Ordinance for a motor vehicle maintenance service facility (quick oil change) at a portion of 434 W. 12 Mile Road (PIN 44-25-11-476-015). The property is currently zoned M-1, Light Industrial.

The application and any supporting documents can be viewed during regular business hours at the Community and Economic Development Department. In addition, the agenda item can be viewed online after 4:00 p.m. on the Friday prior to the meeting at <a href="https://www.madison-heights.org">www.madison-heights.org</a> in the Agenda Center.

For further information, please contact the Community and Economic Development Department at (248) 583-0831.

Cheryl Rottmann, CMC City Clerk (248) 583-0826

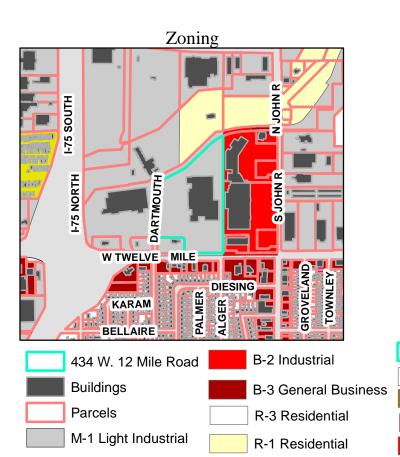


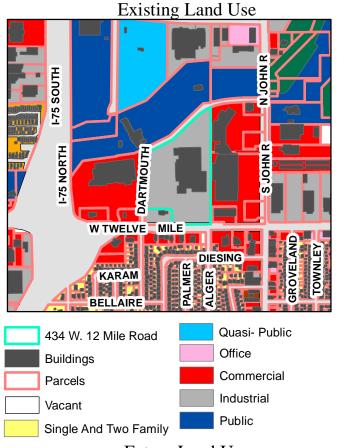
# Site Address: 434 W. 12 Mile Road

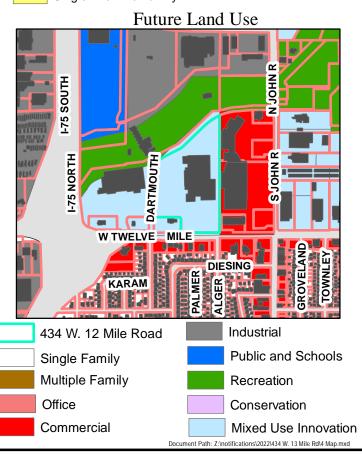


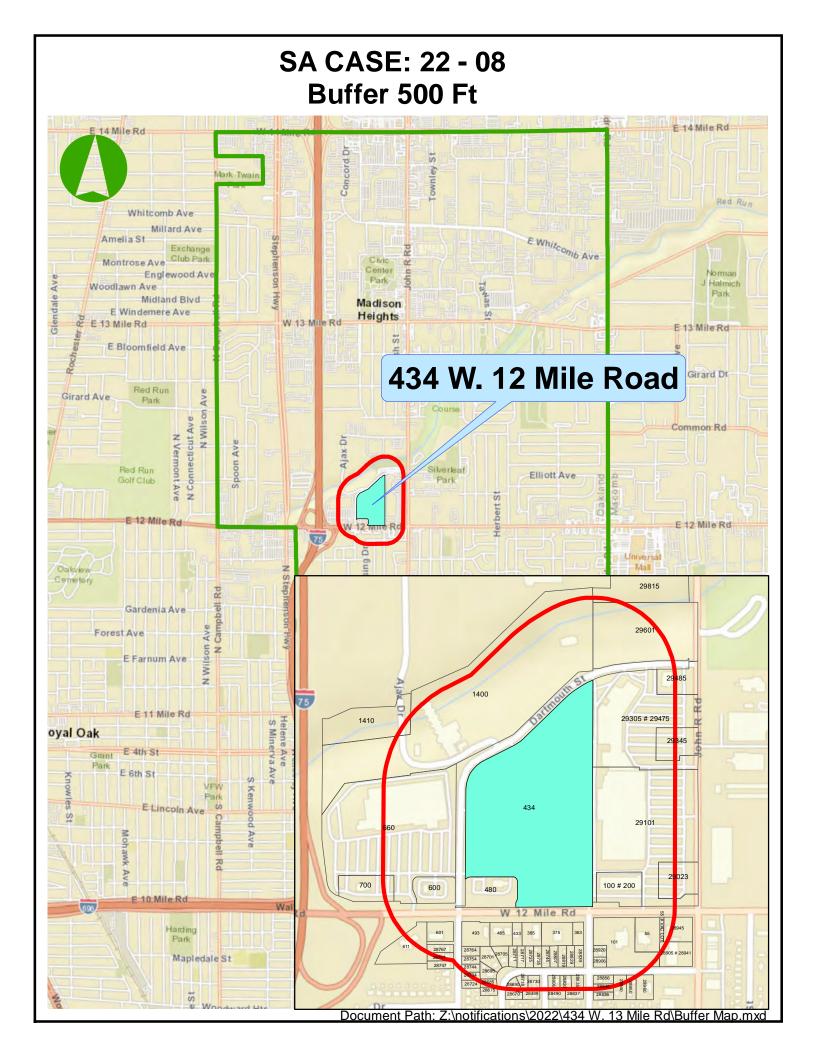
Click for map













# CITY OF MADISON HEIGHTS COMMUNITY DEVELOPMENT DEPARTMENT PETITION FOR USE PERMITTED BY SPECIAL APPROVAL

FOR OFFICE USE ON.	LY
Request PSP 22-08	No:
Date 6-27-22	Filed.
Approved by	CDD.

Approved for Hearing:

I (we) the under signed, do hereby apply and petition the City of Madison Heights for a Special Approval Use Permit and provide the following information.

(Application must be typed) Building Address: No Address Currently	Tax ID No.: 44 - 25 - 11- 476-015 (portion of)
APPLIC Name: Beacon Civil Engineering LLC. / Jarice N. Barbee MSP - Principal	CANT INFORMATION Planner
Mailing Address: 8345 Gunn Highway	City, State, Zip: Tampa, FL, 33626
Phone No.: 850-209-6109  Mailing Address: 8345 Gunn Highway  (Notices will be mailed to this address)  Driver's License No.: \$610-434-93-34	1) - O Date of Birth: 09/21/1993
Interest in Property: N/a - Owner's Representati	ve
BUILDING &	BUSINESS INFORMATION
	ant to Section Quick Service Oil Change of the Zoning Ordinance
Explain Requested Use in Detail: Quick Service Of	I Change - 3 Bay Building
The above referenced parcel is known as: (Lots(s) Acres Subdivision (if platted lot(s)) and is located on the N Subdivision (if platted lot(s)) and is located lot (s) and is locate	SEW (Circle One) side of Street/Road betwee
	No. of Parking Spaces: 10 Private Lot Shared Lot_
No. of Floors: 1 Max. No. of Employees: 4	Male Unsure Female Unsure No. on Largest Single Shift: 4
No. of Seats for Restaurant or Assembly Uses: N/A	
Building: New 1,418 SF or Existing Will Addition Explain: N/A	ns or Alterations to the Building be Required? N/A
	Associated Site Improvements w/ New Construction,
Parking, Curbing, Stormwater, Utility Connection	
Building Owner Name:	Phone No.: Fax No.:
Mailing Addraga	City: 7in:



(Notices will be mailed to this address)

# PETITION FOR USE PERMITTED BY SPECIAL APPROVAL (Continued)

Include one (1) copies of a site plan, no larger than  $11 \times 17$  inches, which meets the requirements of Section 10.514 of the Zoning Ordinance of Madison Heights and the required seven hundred and fifty dollar fee (\$750.00) plus a site plan application.

This petition / application must be signed by both the Owner in Fee of the property and the Applicant prior to submittal. Applicant(s) and property owner(s) hereby consent to city staff, board and commission members, and contractors to access the property for purposes of evaluating the site for the requested action(s).

FOR THE OWNER:	FOR THE APPLICANT IF NOT THE OWNER:
Signature / mil mel	Printed Jarice W. Barba MSP Name
Printed Richard Goodman - VP Name	Printed Jarice N. Barber MSP Name
Date 414 2022	Date \$\langle 12 \rangle 22
NOTARY:	NOTARY:
On this 14th day of Sine	On thisday of
Before me personally appeared	Before me personally appeared
Richard Goodman to me known to be the	to me known to be the
person who executed the forgoing instrument, and	person who executed the forgoing instrument, and
acknowledged that he executed the same as his free act	acknowledged that he executed the same as his free act
and deed.	and deed.
Notary's Signature Lybain alog	Notary's Signature
Notary's Printed Name Stemanie Valdez	Notary's Printed Name
Notary public, State of Michigan, North Carolina	Notary public, State of Michigan,
County of Iredell .	County of
My commission expires Dcccmber 7,2024.	My commission expires
Acting in the County of _\rcdcll	Acting in the County of
OFFICE USE ONLY	
\$750.00 Fee Paid 6 27 -22 Receipt Number 1115	167 By Date: 6-27-22
One Site Plan Attached no larger than 11 x 17 inches	
Site Plan Application: PSPR 22-05 Da	
Copies to C.D.D.	
Notices Mailed to Properties Within 500 Feet	
Council Action	
Meeting Date	

Matt Lonnerstater

Madison Heights City Hall

ATTN: Community and Economic Development,

300 W. Thirteen Mile Road, Madison Heights, MI 48071.



#### LETTER OF TRANSMITTAL

June 29, 2022	Matt Lonnerstater
	Special use application and Site plan revier Hard copy submittal
TRANSMITTED ATTACHED	UNDER SEPARATE COVER
VIA MAIL	OVERNIGHT UPS Courier
ARE THE FOLLOWING ITEMS:  PRINTS  COPY OF LETTER	PLANS SHOP DRAWINGS SPECIFICATIONS CHANGE ORDER
COPIES DATE SHEETS	DESCRIPTION
	x36 Site Plans x17 Site Plans
	ta Survey
1 Ha	azardous Material List
1 Er	nvironmental Permits Checklist
FOR YOUR USE.	RESUBMIT COPIES FOR REVIEW  ORRECTIONS AS NOTED SUBMIT COPIES FOR DISTRIBUTION  EJECTED RETURN CORRECTED PRINTS
BEACON PROJECT NO.: 21516  COPIES TO: Matt Lonnersh  148 - 837 - 269	



# CITY OF MADISON HEIGHTS SPECIAL EXCEPTION

**Project:** 

**T5 Oil Change** 

434 12 Mile Road, Madison Heights, MI

#### **Preface:**

It is understood by the applicant that the project may be further limited in design while undergoing this Special Exception and through the Development Process. The final binding agreement shall be subject to the preparation, negotiation, and execution of any definitive legal documents.



#### Project: T5 Oil Change Madison Heights, MI

#### **Special Exception Request**

#### Introduction

The Applicant plans to redevelop the property with quick service oil change facility. The proposed special exception request will bring commercial activities to a site that has been left vacant. The proposed use will be compatible with surrounding uses and be revenue generating to the City.

#### **Development Code 10.201.4 Special Use Permit Consistency Statements**

4. Review standards and criteria. The city council shall consider the following standards and criteria in their review of all special approval use requests:

<u>Applicant Response:</u> It is understood and acknowledged that conditions may be imposed by the Plan Commission and City Commission.

a. Site plans submitted for special approval uses shall be prepared in conformance with and contain all information as outlined in Section 10.514. Site Plan Review.

<u>Applicant Response:</u> The site plans attached have been prepared in conformance with <u>Section 10.514</u>. Site Plan Review.

b. All design standards or criteria imposed on specific special approval uses elsewhere in this Ordinance shall be met.

<u>Applicant Response:</u> The site plans attached have been prepared in conformance with <u>Section 10.514</u>. Site Plan Review.

- c. The use shall be designed and located so that it is compatible with the surrounding properties, neighborhood and vicinity. At a minimum, this shall include:
  - i. Location of use(s) on site;

**Applicant Response:** The above listed requirement is included in the site plan.

- ii. Height of all improvements and structures; **Applicant Response:** The above listed requirement is included in the site plan.
  - iii. Adjacent conforming land uses;

<u>Applicant Response:</u> The proposed use is compatible with the surrounding adjacent land uses.



iv. Need for proposed use in specified areas of the city;

<u>Applicant Response:</u> The proposed use is being chosen to move forward in this area because this is a more auto centric area of the City, and this type of use directly serves auto users. This location provides an opportunity to care for cars in a positive fashion through productive placement.

v. Conformance with future land use plans for the area as adopted by the planning commission; and

**Applicant Response:** The above listed requirement is included in the site plan.

vi. Compatibility with the permitted principal uses allowed in the zoning district where the special approval use is requested.

Applicant Response: The proposed structures and uses are compatible with the surrounding area and future permitted uses. A landscaping plan has also been provided with this submittal. The proposed Special Exception will not have any substantial or undue adverse effect upon, or will lack amenity or will be incompatible with, the use or enjoyment of adjacent and surrounding property, the character of the neighborhood, traffic conditions, parking, utility facilities, and other matters affecting the public health, safety, and general welfare.

- d. Ingress/egress to the use shall be controlled to assure maximum vehicular and pedestrian safety, convenience and minimum traffic impact on adjacent roads, drives and uses including, but not limited to:
  - Reduction in the number of ingress/egress points through elimination, minimization and/or consolidation of drives and/or curb cuts;
  - ii. Proximity and relation to intersections, specifically with regard to distance from drive(s) to intersection(s);
  - iii. Reduction/elimination of pedestrian/vehicular traffic conflicts;
  - iv. Adequacy of sight distances;
  - v. Location and access of off-street parking;
  - vi. Location and/or potential use of service drives to access multiple parcels, reducing the number of access points necessary to serve the parcels.

<u>Applicant Response:</u> Ingress and Egress locations have been located to minimize traffic hazards and congestion. The site will utilize previous access and egress locations to surrounding roads through previously approved access easements. The vehicular circulation elements of the proposed application will not create hazards to the safety of vehicular or pedestrian traffic on or off the site,



disjointed vehicular or pedestrian circulation paths on or off the site, or undue interference and inconvenience to vehicular and pedestrian travel.

e. Screening shall be provided along all property lines, where council determines such screening is necessary to minimize impact of the use on adjacent properties or uses.

<u>Applicant Response:</u> The above listed requirement is included in the site plan. A landscaping plan will be included in the construction of this project.

f. The use shall be properly served by utilities.

<u>Applicant Response:</u> The proposed Special use is served adequately by public facilities and services. The applicant is responsible for the establishment and provision such services. The subject site has adequate and available Water, Sewer, Electricity, and will treat Stormwater on-site. All applicable development impacts will be properly addressed and mitigated through the concurrency review process. The impacts will be beneficial and revenue generating to the City.

g. The use shall not have an adverse effect on the environment beyond the normal affects of permitted principal uses in the same zoning district and shall not result in an impairment, pollution, and/or destruction of the air, water, and natural resources.

<u>Applicant Response:</u> The proposed structures and uses are compatible with the surrounding area and future permitted uses. A landscaping plan has also been provided with this submittal. The proposed Special Exception will not have any substantial or undue adverse effect upon, or will lack amenity or will be incompatible with, the use or enjoyment of adjacent and surrounding property, the character of the neighborhood, traffic conditions, parking, utility facilities, and other matters affecting the public health, safety, and general welfare.

h. The use shall be specifically scrutinized for conformance with the performance standards outlined in <u>section 10.509</u> of this Ordinance.

**Applicant Response:** The applicant acknowledges this statement.

i. The proposed use shall be designed as to location, size, intensity, site layout, and periods of operation to eliminate any possible nuisances which might be noxious to the occupants of any other nearby properties. The use shall not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive smoke, fumes, glare, noise, vibration, odors, and adverse environmental impacts.

<u>Applicant Response:</u> The proposed structures and uses are compatible with the surrounding area and future permitted uses. A landscaping plan has also been provided



with this submittal. The proposed Special Exception will not have any substantial or undue adverse effect upon, or will lack amenity or will be incompatible with, the use or enjoyment of adjacent and surrounding property, the character of the neighborhood, traffic conditions, parking, utility facilities, and other matters affecting the public health, safety, and general welfare.

j. The proposed use does not impose an unreasonable burden upon public services and utilities in relation to the burden imposed by permitted principal uses in the same zoning district.

<u>Applicant Response:</u> The proposed Special use is served adequately by public facilities and services. The applicant is responsible for the establishment and provision such services. The subject site has adequate and available Water, Sewer, Electricity, and will treat Stormwater on-site. All applicable development impacts will be properly addressed and mitigated through the concurrency review process. The impacts will be beneficial and revenue generating to the City. No unreasonable burdens will be created by this project.

- k. The city council may impose conditions in granting special approval that it deems necessary to fulfill the spirit and purpose of this Ordinance. The conditions may include those necessary to ensure that public services and facilities affected by a proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity, to protect the natural environment and conserve natural resources and energy, to ensure compatibility with adjacent uses of land, and to promote the use of land in a socially and economically desirable manner. Conditions imposed shall:
  - i. Be designed to protect natural resources, the health, safety and welfare, as well as the social and economic well being of those who will use the land use or activity under consideration, residents and landowners immediately adjacent to the proposed land use or activity, and the community as a whole.

**Applicant Response:** The applicant acknowledges this statement.

ii. Be related to the valid exercise of the police power and purposes that are affected by the proposed use or activity.

**Applicant Response:** The applicant acknowledges this statement.

iii. Be necessary to meet the intent and purpose of the zoning regulations; be related to the standards established in this Ordinance for the land use or activity under consideration (if applicable); and be necessary to ensure compliance with those standards.

**Applicant Response:** The applicant acknowledges this statement.



iv. Provide adequate safeguards as deemed necessary for the protection of the general welfare and individual property rights, and for ensuring that the intent and objectives of this Ordinance will be observed. The breach of any condition, safeguard or requirement, and the failure to correct such breach within 30 days after an order to correct is issued by the city shall be reason for immediate revocation of the special approval. Conditions and requirements stated as a part of special use permit authorizations shall be continuing obligations of the holders of such permits and are binding upon their heirs and assigns and upon any persons taking title to the affected property while such special use permit is in effect.

**Applicant Response:** The applicant acknowledges this statement.

I. The discontinuance of a special use after a specified time may be a condition to the issuance of the permit. Renewal of a special use permit may be granted after a review and determination by the city council that continuing private need and public benefit will be served by such renewal. Renewal applications shall be in accord with standards and requirements in effect at the time that the renewal is requested.

**Applicant Response:** The applicant acknowledges this statement.



#### 5. General stipulations.

a. Application for special approval shall be made with the full consent of all persons having an ownership interest in the land on which the special approval use is requested. All persons having ownership interest in the property shall sign the application prior to its acceptance by the city.

<u>Applicant Response:</u> The proposed application has been produced with full permission from all interested parties.

b. Special approval is valid for a period of one year. Site plan approval and commencement of construction of approved improvements must occur within one year of the city council's special approval or the special approval shall be automatically null and void. The city council may grant an extension for good cause for a period not to exceed six months from the date of expiration of the original approval provided for extension is made during the period of effectiveness.

#### **<u>Applicant Response:</u>** The applicant acknowledges this statement.

c. The record of the city council shall be the approved minutes for special approval use cases. Said record shall be made available to the applicant whether the special approval request is approved, approved with conditions, or denied and shall constitute notice of the city council's decision regarding the special approval request.

#### **Applicant Response:** The applicant acknowledges this statement.

d. The city council shall give notice of the time and place of the required public hearing as required by state law.

#### **<u>Applicant Response:</u>** The applicant acknowledges this statement.

e. All construction, improvement or use of a parcel or parcels of land shall be in complete accord with the special approval, any conditions imposed by the city council and the approved site plan.

#### **Applicant Response:** The applicant acknowledges this statement.

f. A special use permit may be terminated by subsequent rezoning of the affected site as a part of an appropriate zoning district, subject to any vested nonconforming use rights. Such termination may be initiated only after determination by the city council that the development status of the site is in accordance with requirements of the zoning district in which it is to be placed. There shall be no waiver of standards or procedures, including publication, hearings, planning commission and city council action, in regard to the rezoning of a site which is occupied or used under a special use permit.

**Applicant Response:** The applicant acknowledges this statement.



g. No reapplication, reconsideration and/or rehearing for a special use permit which has been denied by the city council shall be resubmitted until the expiration of one year from the date of such denial, except on grounds of newly discovered evidence or proof of materially changed conditions, sufficient to justify reconsideration by the city council. Each reapplication will be treated as a new application.

**Applicant Response:** The provided application does not fall into this category.

h. The conditions imposed with respect to the approval of a special land use shall be recorded in the record of the approval action and shall remain unchanged except upon the mutual consent of the approving authority and the landowner. The city clerk shall maintain a record of changes granted in conditions.

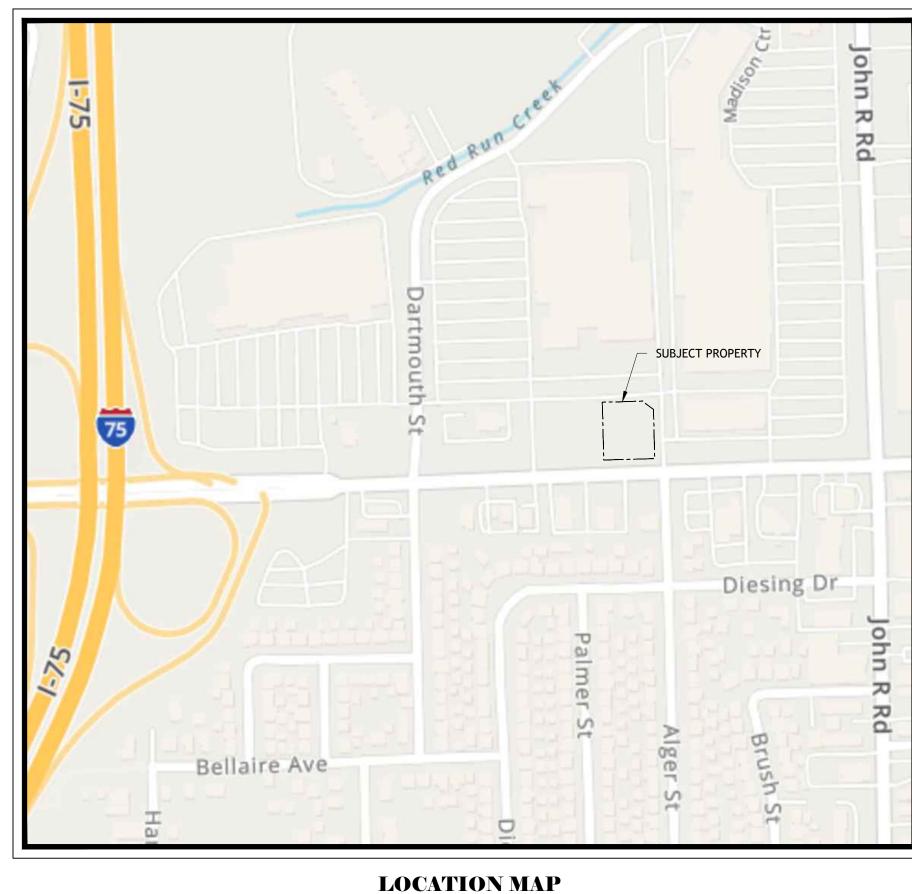
<u>Applicant Response:</u> The applicant acknowledges this statement and will properly record all materials.

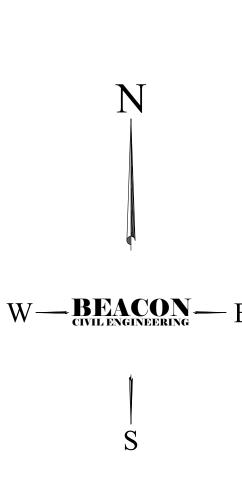
Jarice N. Barbee MSP
Principal Planner
O: (813) 882-4815 (ext. 103)
C: (850) 209 6109 (Preferred)
E: jbarbee@beaconcivil.com
Beacon Civil Engineering, LLC.
8345 Gunn Highway, Tampa, FL, 33626

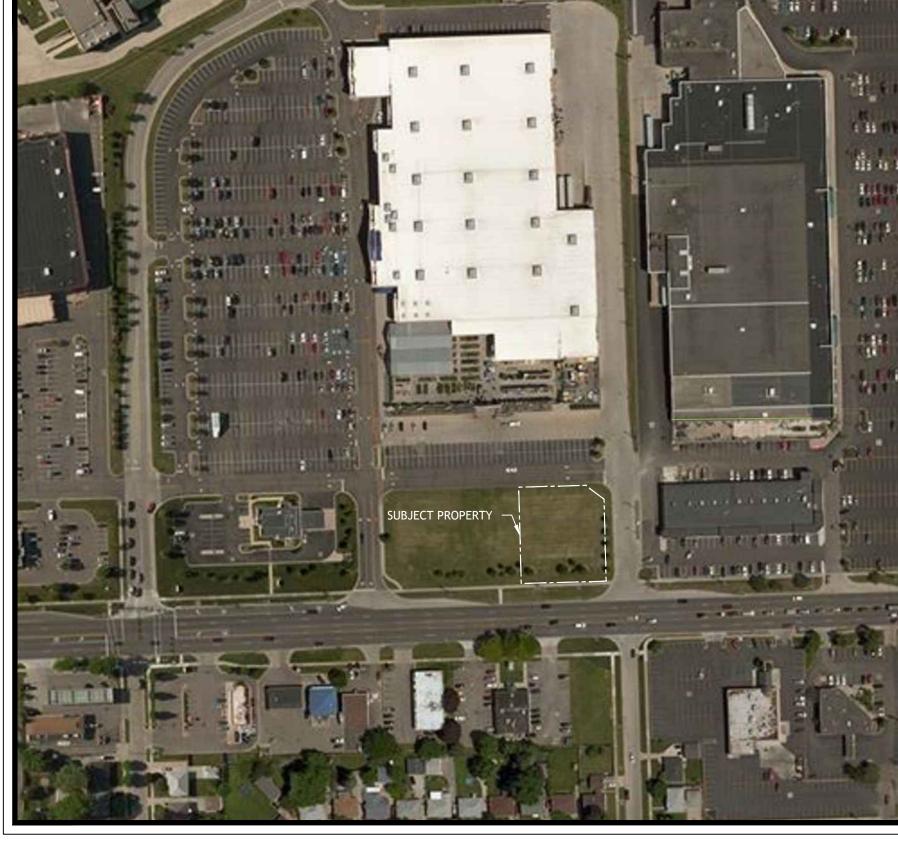


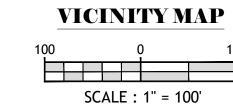
# PRELIMINARY CIVIL SITE PLAN FOR TAKE 5 OIL CHANGE

# MADISON HEIGHTS, MICHIGAN









# LEGAL DESCRIPTION

DRAWING LIST		
SHEET NO.	SHEET TITLE	INITIAL SUBMITTAL 4/25/2022
C0.0	COVER SHEET	•
C1.0	CONSTRUCTION NOTES	•
C2.0	EXISTING CONDITIONS AND DEMOLITION PLAN	•
C3.0	SITE PLAN	•
C3.1	SITE DETIALS	•
C4.0	GRADING & DRAINAGE PLAN	•
C4.1	GRADING DETAILS	•
C5.0	UTILITY PLAN	•
C5.1	UTILITY DETAILS	•
LP-1	LANDSCAPE PLANTINGS (BY OTHERS)	•
I D-2	I ANDSCADE DETAILS AND SPECIFICATIONS (BY OTHERS)	

PART OF THE SOUTHEAST 1/4 OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, CITY OFMADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS: BEGINNING AT POINT DISTANT SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST642.42 FEET FROM SOUTHEAST SECTION CORNER; THENCE NORTH 01 DEGREES 45 MINUTES 23 SECONDS WEST 1466.47 FEET; THENCE SOUTH 83 DEGREES 57 MINUTES 31SECONDS WEST 88.16 FEET THENCE SOUTH 44 DEGREES 17 MINUTES 15 SECONDS WEST548.27 FEET; THENCE SOUTH 61 DEGREES 02 MINUTES 30 SECONDS WEST 390.07 FEET; THENCE SOUTH 01 DEGREES 25 MINUTES 47 SECONDS EAST 908.35 FEET; THENCE NORTH 87 DEGREES 44 MINUTES 30 SECONDS EAST 834.52 FEET TO BEGINNING. EXCEPTBEGINNING AT A POINT 285.00 FEET TO THE POINT OF BEGINNING.TOGETHER WITH NON-EXCLUSIVE EASEMENTS AS CREATED, LIMITED AND DEFINED IN ENTRANCE EASEMENT AGREEMENT RECORDED IN LIBER 38007, PAGE 88, OAKLAND COUNTY RECORDS. ALSO, TOGETHER WITH NON-EXCLUSIVE EASEMENTS AS CREATED, LIMITED AND DEFINED IN RING ROAD EASEMENT AGREEMENT RECORDED IN LIBER 38007, PAGE 126, OAKLAND COUNTY RECORDS. EXCEPTING THEREFROM, A PARCEL SAID SECTION 11 AND ALONG THE CENTERLINE OF 12 MILE ROAD (VARIABLE WIDTH); THENCE NORTH 01 DEGREES 29 OF LAND, LOCATED IN THE SOUTHEAST 1/4 OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 11; THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 1417.18 FEET (RECORDED AS SOUTH 90 DEGREES 00 MINUTES 00 SECONDS WEST) ALONG THE SOUTH LINE OF SAID SECTION 11 AND THE CENTERLINE OF 12 MILE ROAD (VARIABLE WIDTH); THENCE NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 328.00 FEET (RECORDED AS NORTH 00 DEGREES 41 MINUTES 40 SECONDS WEST) ALONG THE EASTERLY RIGHT-OF-WAY LINE OF DARTMOUTH STREET (60 FEET WIDE) FOR THE PLACE OF BEGINNING; THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 60.00 FEET (RECORDED AS SOUTH 88 DEGREES 32 MINUTES 10 SECONDS WEST) TO THE WESTERLY RIGHT-OF-WAY LINE OF SAID DARTMOUTH STREET; THENCE ALONG SAID LINE FOR THE FOLLOWING FOUR COURSES: NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 579.59 FEET (RECORDED AS NORTH 01 DEGREES 25 MINUTES 47 SECONDS WEST), NORTH 61 DEGREES 06 MINUTES

30 SECONDS EAST 390.07 FEET (RECORDED AS NORTH 61 DEGREES 02 MINUTES 30 SECONDS EAST), NORTH 44 DEGREES 10 MINUTES 20 SECONDS EAST 548.25 FEET (RECORDED AS NORTH 44 DEGREES 17 MINUTES 15 SECONDS EAST 548.27 FEET) AND NORTH 63 SECONDS 54 MINUTES 50 SECONDS EAST 86.14 FEET (RECORDED AS NORTH 83 DEGREES 57 MINUTES 31 SECONDS EAST 88.16 FEET); THENCE SOUTH 01 DEGREES 48 MINUTES 30 SECONDS EAST 55.35 FEET (RECORDED AS SOUTH 01 SECONDS 45 MINUTES 23 SECONDS EAST) TO THE SOUTHEASTERLY EAST 420.70 FEET TO THE PLACE OF BEGINNING. ALSO, EXCEPTING THEREFROM, COMMENCING AT THE SOUTHEAST CORNER OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, CITY OF MADISON HEIGHTS, OAKLAND COUNTY, MINUTES 20 SECONDS WEST 60.01 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 145.98 FEET ALONG THE EASTERLY RIGHT-OF-WAY OF DARTMOUTH STREET (60 FEET WIDE); THENCE 36.30 FEET ALONG A 47.00 FOOT RADIUS NON-TANGENTIAL CIRCULAR CURVE TO THE RIGHT, WITH A CHORD WHICH BEARS NORTH 66 DEGREES 44 MINUTES 17 SECONDS EAST 35.41 FEET; THENCE NORTH 88 DEGREES 05 MINUTES 21 SECONDS EAST 263.88 FEET; THENCE 31.30 FEET ALONG A 30.00 FOOT RADIUS NON-TANGENTIAL CIRCULAR CURVE TO THE RIGHT WITH A CHORD WHICH BEARS SOUTH 42 DEGREES 31 MINUTES 52 SECONDS EAST 29.90 FEET; THENCE SOUTH 02 DEGREES 15 MINUTES 30 SECONDS EAST 102.90 FEET; THENCE 33.94 FEET ALONG A 49.50 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, WITH A CHORD WHICH BEARS SOUTH 17 DEGREES 23 MINUTES 01 SECONDS WEST 33.28 FEET; THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 307.03 FEET ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 12 MILE ROAD TO THE PLACE OF BEGINNING.

# **DEVELOPMENT TEAM**

# DEVELOPER/APPLICANT

DRIVEN BRANDS 6300 SOUTH SYRACUSE WAY STE 290 GREENWOOD VILLAGE, CO 80111 CONTACT: MATTHEW GILBERT PHONE: (980) 259-0701

**ENGINEER** BEACON CIVIL ENGINEERING, LLC. 8345 GUNN HIGHWAY TAMPA, FL 33626 CONTACT: LAURIE BURCAW, P.E.

PHONE: (813) 523-7412

#### OWNER DRIVEN BRANDS 6300 SOUTH SYRACUSE WAY STE 290 GREENWOOD VILLAGE, CO 80111 CONTACT: MATTHEW GILBERT

PHONE: (980) 259-0701

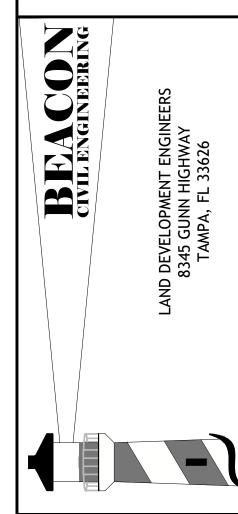
PHONE: (479) 443-4506

**SURVEYOR** BLEW & ASSOCIATES, PA 3825 N. SHILOH DRIVE FAYETTEVILLE, AK 72760 CONTACT: BUCKLEY D. BLEW, PS

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CONSTRUCTION



TAKE 5 OIL **CHANGE** 

**MADISON HEIGHTS** 

434 12 MILE ROAD MADISON HEIGHTS **MICHIGAN** 

**COVER SHEET** 

SHEET NUMBER:

#### **GENERAL NOTES:**

- 1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS WORK, PRIOR TO CONSTRUCTION.
- 2. PRIOR TO THE INITIATION OF SITE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ANY EXISTING UTILITIES INCLUDING GAS, WATER, ELECTRIC, COMMUNICATIONS, CABLE TV, SANITARY AND STORM SEWERS, ON AND/OR ADJACENT TO THE SITE, REMOVE OR CAP AS NECESSARY.
- 3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL CALL "MISSDIG 811" AT 1-800-482-7171, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO ARRANGE FOR FIELD LOCATIONS OF BURIED UTILITIES.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUBCONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
- 5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT INSPECTION AND CERTIFICATION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS/REQUIREMENTS.
- 6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR APPROVAL, PRIOR TO ORDERING. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- 7. ALL UTILITY SERVICE STUB-OUTS (WATER, SANITARY SEWER, etc.) ARE TO BE INSTALLED TO WITHIN 5' OF BUILDING(S), UNLESS OTHERWISE NOTED ON PLANS.
- 8. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.

#### 9. SAFET

- A. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL.
- B. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
- C. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF MICHIGAN, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS.
- D. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, FDOT INDICES AND GOVERNING JURISDICTION FACILITY DESIGN GUIDELINES (LATEST EDITIONS).
- E. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
- 10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY "ON-SITE PIPING PERMITS" (IF REQUIRED) FOR CONSTRUCTION OF THE PROPOSED UTILITY FACILITIES. THIS PERMIT MUST BE OBTAINED BY A DULY LICENSED PLUMBING CONTRACTOR (OR CLASS A GENERAL CONTRACTOR) PRIOR TO THE START OF CONSTRUCTION. THESE PLANS AND ANY SUBSEQUENT REVISIONS TO THESE PLANS, THAT ARE ISSUED BY THE ENGINEER, WILL BE SUBJECT TO THE APPROVAL CONDITIONS OF THIS PERMIT.
- 11. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
- 12. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION.
- 13. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE
- 14. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH ANY OTHER WORK BEING PERFORMED ON-SITE BY OTHER CONTRACTORS/ SUBCONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE GENERAL CONTRACTOR TO COORDINATE AND SCHEDULE ITS ACTIVITIES ACCORDINGLY.

# AS-BUILT:

UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A REGISTERED LAND SURVEYOR. THIS "AS-BUILT" INFORMATION SHALL INCLUDE INVERT ELEVATIONS, DRAINAGE STRUCTURES, WEIRS, LOCATIONS OF STRUCTURES FOR ALL UTILITIES INSTALLED, AS WELL AS TOP OF BANK, TOE OF SLOPE AND GRADE BREAK LOCATIONS AND ELEVATIONS FOR POND AND DITCH/SWALE CONSTRUCTION. NO ENGINEER'S CERTIFICATIONS FOR CERTIFICATE OF OCCUPANCY (C.O.) PURPOSES WILL BE MADE UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.

#### **CLEARING AND SITE PREPARATION NOTES:**

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION OF THE EROSION CONTROL DEVICES, AS SHOWN ON THE CONSTRUCTION PLANS, PRIOR TO ANY SITE CLEARING. REFER TO THE "EROSION CONTROL NOTES" SECTION CONTAINED HEREIN FOR ADDITIONAL REQUIREMENTS.
- 2. PRIOR TO ANY SITE CLEARING, ALL TREES SHOWN TO REMAIN, AS INDICATED ON THE CONSTRUCTION PLANS, SHALL BE PROTECTED IN ACCORDANCE WITH LOCAL TREE ORDINANCES, AND DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. NO TREE(S) SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER AND THE LOCAL AGENCY HAVING JURISDICTION OVER THESE ACTIVITIES.
- 3. THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL, IMMEDIATELY FOLLOWING CONSTRUCTION.
- 4. STRIPPED TOPSOIL REMOVED DURING CLEARING AND GRUBBING ACTIVITIES SHALL BE STOCKPILED, TO BE USED FOR LANDSCAPING PURPOSES, UNLESS OTHERWISE DIRECTED BY THE OWNER. REMAINING EARTHWORK THAT RESULTS FROM CLEARING AND GRUBBING OR SITE EXCAVATION IS TO BE UTILIZED ON-SITE, PROVIDED THE MATERIAL IS DEEMED SUITABLE BY THE OWNER'S SOILS TESTING COMPANY. EXCESS MATERIAL IS TO EITHER BE STOCKPILED ON-SITE, AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER, OR REMOVED FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING EXCESS EARTHWORK FROM THE SITE.
- 5. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE, BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS.
- 6. THE CONTRACTOR IS TO PREPARE THE SITE IN ACCORDANCE WITH THE SOILS REPORT, COPIES OF WHICH ARE AVAILABLE THROUGH THE OWNER OR SOILS TESTING COMPANY DIRECTLY.

### **EROSION CONTROL NOTES:**

- 1. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIERS (HAY BALES OR SILTATION CURTAINS) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTORS IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
- 2. THE CONTRACTOR SHALL LIMIT THE DISCHARGE OF TURBID WATERS OFF-SITE, OR INTO ON-SITE/OFF-SITE WETLANDS (IF APPLICABLE), TO NO MORE THAN THE SPECIFIED NTU'S (NEPHELOMETRIC TURBIDITY UNITS) GOVERNED BY THE APPLICABLE GOVERNING JURISDICTION, ABOVE BACKGROUND LEVELS.
- 3. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
- 4. CONTRACTOR SHALL INSPECT AND MAINTAIN ON A DAILY BASIS ALL EROSION/SEDIMENTATION CONTROL FACILITIES.
- 5. THE CONTRACTOR SHALL ENSURE THAT SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION CONTROL BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS.
- 6. CONTRACTOR SHALL MAKE SURE THAT UNDUE SOIL/SAND IS NOT TRACKED OFFSITE, IF IT BECOMES AN ISSUE, CONTRACTOR SHALL ADD A CONSTRUCTION ENTRANCE WITH SEDIMENT REMOVAL (GRAVEL DRIVE) AND SHALL REMOVE ANY SEDIMENT/SOIL TRACKED OFFSITE DAILY OR SOONER.

# CONSTRUCTION SITE WORK TESTING:

- ALL SITE WORK CONSTRUCTION TESTING SHALL BE PERFORMED BY A CERTIFIED/LICENSED GEOTECHNICAL ENGINEERING FIRM.
- 2. ALL SITE WORK CONSTRUCTION TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL REPORT AND/OR THE TESTING PARAMETERS OF THE LOCAL MUNICIPALITY/AGENCY HAVING JURISDICTION OVER THE SITE WORK. THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- 3. COPIES OF PASSING TEST RESULTS SHALL BE PROVIDED TO THE DEVELOPER, ENGINEER OF RECORD, CONTRACTOR AND LOCAL MUNICIPALITY/AGENCY FOR PURPOSES, SUCH AS BUT NOT LIMITED TO, CERTIFICATION, AND ACCEPTANCE OF FACILITIES BY THE DEVELOPER AND/OR MUNICIPALITY/AGENCY.
- 4. THE SERVICES OF A CONSTRUCTION TESTING GEOTECHNICAL FIRM SHALL BE RETAINED BY THE DEVELOPER, UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.
- 5. ENGINEER WILL NOT BE RESPONSIBLE FOR SCHEDULING, COORDINATION OR EVALUATION OF THE SOILS TESTING AND CERTIFICATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER/DEVELOPER TO MAKE THE NECESSARY ARRANGEMENTS DIRECTLY WITH THE SOILS TESTING LABORATORY/GEOTECHNICAL FIRM AND THE SITE CONTRACTOR.

# TESTING AND INSPECTION REQUIREMENTS (SANITARY):

- 1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNERS ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS ASSOCIATED WITH A TELEVISED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TV INSPECTION TAPE TO THE ENGINEER, THE OWNER AND THE APPLICABLE MUNICIPALITY/AGENCY.
- 2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- 3. ALL FORCE MAINS (IF APPLICABLE) SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTORS' RESPONSIBILITY.

#### PAVING AND GRADING NOTES:

- 1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNERS ENGINEER, OR OWNERS SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
- 3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
- 4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES UNLESS OTHERWISE NOTED
- 5. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
- 6. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT, PER DETAILS HEREIN.
- 7. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE LATEST EDITION OF M.D.O.T. STANDARD PLANS AND DETAILS AND SPECIFICATIONS OF ALL M.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.
- 8. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.
- 9. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER PLACED CONCRETE, ETC.)
- 10. THE CONTRACTOR WILL STABILIZE, BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS, ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.

# TESTING AND INSPECTION REQUIREMENTS (PAVING/GRADING):

- 1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH SITE SPECIFIC GEOTECHNICAL REPORT FOR THE SITE, AS WELL AS THE TESTING SCHEDULE REQUIRED BY FDOT AND THE AFFECTED MUNICIPALITY. UPON COMPLETION OF WORK, THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
- 2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.

# SANITARY SYSTEM NOTES:

- 1. ALL DIP PIPE SHALL BE CLASS 50 OR HIGHER. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.
- 2. ALL PVC PIPE SHALL BE SOLID WALL POLYVINYL CHLORIDE PIPE AND COMPLY WITH ASTM D 3034 AND ALL APPLICABLE ASTM DOCUMENTS AS COVERED IN SECTION No. 2 OF ASTM D 3034. MAIN LINES SHALL BE A MINIMUM OF 8" DIAMETER, AND LATERALS SHALL BE A MINIMUM 6 " DIAMETER.
- 3. ALL SANITARY SEWER MAINS, LATERALS AND FORCE MAINS SHALL HAVE A MINIMUM OF 60 INCHES OF COVER, UNLESS OTHERWISE NOTED ON PLANS.
- 4. ALL GRAVITY SEWERS MUST BE SDR 26 PVC OR DIP CLASS 54 PIPE. ALTERNATIVES MUST BE APPROVED BY APPLICABLE JURISDICTION/ENGINEER OF RECORD. ELASTOMERIC GASKET JOINTS SHALL BE UTILIZED FOR PVC PIPE, AND SHALL COMPLY WITH ASTM F477, ASTM D3231 & ASTM F1336. JOINTS SHALL COMPLY WITH ASTM D3212.
- 5. ALL PVC FORCE MAINS (IF REQUIRED) SHALL BE CLASS 200, DR 14 FOR 4" DIAMETER, AND CLASS 150, DR 18 FOR 6" TO 12" DIAMETER PIPE, IN ACCORDANCE WITH AWWA C900 STANDARDS. PVC FORCE MAIN PIPE SMALLER THAN 4" DIAMETER SHALL BE CLASS 200, SDR 21, IN ACCORDANCE WITH ASTM D 2241. FORCE MAINS SHALL BE SPIRAL WRAPPED WITH 2 INCH WIDE DARK GREEN STICK-ON VINYL TAPE. FORCE MAINS WITHIN THE RIGHT-OF-WAY SHALL BE CLASS 52 DIP, MINIMUM 3" DIAMETER.
- 6. ALL SANITARY MANHOLES SHALL BE LOCATED NO MORE THAN 400 FEET APART AND SHALL CONFORM TO THE DETAILS CONTAINED HEREIN, AS WELL AS WITH ASTM C478.
- 7. ALL DUCTILE IRON PIPE SHALL MEET REQUIREMENTS OF AWWA C151, ANSI SPEC. A21.51.
- 8. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROVIDED WITH A VIRGIN POLYETHYLENE INTERIOR LINING COMPLYING WITH ASTM D 1248 (40 MILS THICK) HEAT BONDED TO THE INTERIOR OF ALL PIPES. ALL DIP PIPE SHALL HAVE A STANDARD OUTSIDE COATING COMPLYING WITH ASTM C151-8.1.
- 9. ALL SLOPES FOR GRAVITY SEWER MAINS AND SERVICE CONNECTIONS SHALL COMPLY WITH THE FOLLOWING MINIMUM GRADES: 6" @ 1.00%, 8" @ 0.50%.
- 10. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE JURISDICTIONAL STANDARD SPECIFICATIONS.
- 11. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING PROPOSED FACILITIES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION(S) OF EXISTING CONNECTION POINT(S) AND NOTIFY THE OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 12. SANITARY SEWER MAINS SHALL HAVE SUITABLE MAGNETIC LOCATOR TAPE(S) BURIED AT LEAST 18 INCHES ABOVE THE MAIN LINES.
- 13. FORCE MAINS SHALL HAVE SUITABLE MAGNETIC LOCATOR TAPE(S) BURIED AT LEAST 18 INCHES ABOVE THE FORCE MAIN.

#### **WATER SYSTEM NOTES:**

. SANITARY SEWERS, FORCE MAINS, AND STORM SEWERS SHOULD ALWAYS CROSS UNDERNEATH WATER MAINS. INSTALLATIONS OF SANITARY SEWERS, FORCE MAINS AND STORM SEWERS, AT CROSSINGS OF WATER MAINS, SHALL BE PERFORMED SO AS TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE, WHENEVER POSSIBLE. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS AND WATER JOINTS SHALL BE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS. WHERE SANITARY SEWERS, FORCE MAINS, AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP), AT THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED.). SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO (2) JOINTS IN LIEU OF DIP, THE SANITARY SEWER MAY BE PLACED IN A SLEEVE FOR 20 FEET CENTERED ON THE POINT OF CROSSING. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE, AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING. WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER WATER MAINS, THE CRITERIA FOR MINIMUM SEPARATION OF 18 INCHES BETWEEN LINES, AND 10 FEET BETWEEN JOINTS CENTERED AT THE POINT OF CROSSING SHALL BE REQUIRED. THE WATER MAIN SHALL BE PLACED IN A SLEEVE FOR 20 FEET CENTERED ON THE POINT OF CROSSING. ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (i.e., PIPES CENTERED ON THE CROSSING). WHERE A PROPOSED PIPE CONFLICTS WITH AN EXISTING PIPE, THE PROPOSED PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED SO AS TO SATISFY THE REQUIREMENTS IDENTIFIED ABOVE.

WHEN THE RECLAIMED WATER LINE IS TRANSPORTING WATER FOR PUBLIC ACCESS IRRIGATION:
MAXIMUM OBTAINABLE SEPARATION OF RECLAIMED WATER LINES AND DOMESTIC WATER LINES SHALL BE
PRACTICED. A MINIMUM HORIZONTAL SEPARATION OF FIVE FEET (CENTER TO CENTER) OR THREE FEET (OUTSIDE
TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER LINES AND EITHER POTABLE WATER MAINS OR
SEWAGE COLLECTION LINES. AN 18 INCH VERTICAL SEPARATION SHALL BE MAINTAINED AT CROSSINGS.

WHEN THE RECLAIMED WATER LINE IS TRANSPORTING WATER FOR NON-PUBLIC ACCESS IRRIGATION:
THE RECLAIMED WATER MAIN SHALL BE TREATED LIKE A SANITARY SEWER, AND A 10-FT. HORIZONTAL AND 18
INCH VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE RECLAIMED WATER MAIN AND ALL EXISTING
OR PROPOSED POTABLE WATER MAINS. NO MINIMUM SEPARATION IS REQUIRED BETWEEN THE RECLAIMED
WATER MAIN AND SANITARY SEWERS, OTHER THAN NECESSARY TO ENSURE STRUCTURAL INTEGRITY AND
PROTECTION OF THE LINES THEMSELVES.

- 2. A MINIMUM 10 FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER (INCLUDING FORCE MAINS) AND EXISTING OR PROPOSED WATER MAINS, IN PARALLEL INSTALLATIONS, WHENEVER POSSIBLE. THE DISTANCE FOR SEPARATION SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE INSTALLED IN A SEPARATE TRENCH, OR IN AN UNDISTURBED EARTH SHELF, LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN, AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE, AND WATER AND SEWER JOINTS SHALL BE STAGGERED. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES, IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR FORCE MAIN SHALL BE CONSTRUCTED OF DIP (IF AVAILABLE IN THE SIZE PROPOSED), WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE LOCATED ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (i.e.. STAGGERED JOINTS).
- 3. ALL DIP PIPE SHALL BE MW CLASS 50 OR PRESSURE CLASS 250. REFER TO NOTE #: 8 BELOW FOR ADDITIONAL DIP SPECIFICATIONS. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.
- 4. ALL WATER MAIN PIPE FITTINGS AND APPURTENANCES SHALL BE INSTALLED TO COMPLY WITH APPLICABLE UTILITY DEPARTMENT SPECIFICATIONS.
- 5. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 36 INCHES OF COVER. WHERE POSSIBLE, 48" MAXIMUM COVER.
- 6. ALL WATER SERVICE LINES, VALVES AND METERS SHALL BE INSTALLED TO COMPLY WITH APPLICABLE MUNICIPALITY/AGENCY DEPARTMENT STANDARDS AND SPECIFICATIONS.
- 7. THRUST BLOCKING/RESTAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS, IN ACCORDANCE WITH APPLICABLE UTILITY DEPT. SPECIFICATIONS.
- 8. ALL DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C151/A21.51. PIPE SHALL BE FURNISHED IN 18 OR 20 FOOT SECTIONS, PIPE THICKNESS SHALL BE CLASS 50, UNLESS OTHERWISE SPECIFIED..
- 9. ALL WATER SYSTEM CONSTRUCTION, UP TO AND INCLUDING POINT OF METERING AND BACK FLOW PREVENTION (IF REQUIRED), SHALL BE BUILT ACCORDING TO THE PREVIOUSLY REFERENCED STANDARDS AND SPECIFICATIONS.
- 10. ALL ON-SITE FIRE HYDRANTS SHALL BE PAINTED WITH HIGH GRADE ENAMEL FEDERAL, COLOR SHALL COMPLY WITH APPLICABLE UTILITY HAVING JURISDICTION, AND BE OSHA APPROVED, AND MUST BE LOCATED A MINIMUM OF 6 FEET, OR AS APPROVED BY THE APPLICABLE JURISDICTION, FROM THE EDGE OF PAVEMENT OR BACK OF CURB, OTHERWISE BOLLARDS WILL BE REQUIRED FOR PROTECTION. ALL FIRE HYDRANTS SHALL COMPLY WITH AWWA STANDARDS C502-80 THEREOF.
- 11. CONTRACTOR TO INSTALL TEMPORARY BLOWOFFS, AT THE END(S) OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BUILDING(S), TO ASSURE ADEQUATE FLUSHING AND DISINFECTION/CHLORINATION.
- 12. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA MANUAL M23, CONCERNING HYDROSTATIC TESTING OF PVC PIPING. OFF-SITE UTILITIES HYDROSTATIC TESTING TO BE WITNESSED BY MUNICIPAL UTILITY DEPARTMENT INSPECTOR.
- 13. ALL WATER MAINS SHALL BE STERILIZED IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE LATEST AWWA SPECIFICATION C651 AND JURISDICTIONAL UTILITY DEPARTMENT SPECIFICATIONS.
- 14. ALL PVC WATER MAIN, 4" TO 12" DIAMETER PIPING, SHALL CONFORM TO AWWA C900 (DR 18) STANDARD SPECIFICATIONS, PRESSURE CLASS 150 PSI. ALL PVC WATER MAIN PIPING LESS THAN 4" DIAMETER SHALL BE SCHEDULE 80, PRESSURE CLASS 200 PSI.
- 15. ALL PVC WATER MAINS SHALL HAVE A SUITABLE MAGNETIC LOCATOR TAPE BURIED OVER THE WATER MAIN, BURIED NO LESS THAT 18 INCHES ABOVE MAIN LINES. THE TAPE SHALL BE AT LEAST 5-1/2 MILS THICK, 2 INCH MINIMUM WIDTH, AND MADE WITH AN ALUMINUM MATERIAL SANDWICHED BETWEEN 2 LAYERS OF POLYETHYLENE. IT SHALL HAVE IMPRINTED, IN PERMANENT BLACK INK WITH ONE INCH TALL LETTERS, "CAUTION: WATER LINE BURIED BELOW", ON BLUE BACKGROUND. THE TAPE SHALL BE CONTINUOUS BETWEEN VALVES, AND SECURED TO EACH VALVE. WHERE OTHER LINES OR SERVICE LINES JOIN THE WATER MAIN, THE TAPE USED FOR DETECTION OF THESE LINES SHALL BE SECURED TO THE MAIN LINE TAPE.
- 16. FIRE LINES SHALL BE INSTALLED BY A CONTRACTOR, DULY LICENSED BY THE STATE OF MICHIGAN FIRE MARSHALL'S OFFICE. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO CONSTRUCTION OF THE FIRE PROTECTION SYSTEM.
- 17. FIRE PROTECTION SHALL MEET  $\underline{\mathsf{ALL}}$  THE REQUIREMENTS OF THE APPLICABLE MUNICIPALITY OR COUNTY.

# TESTING AND INSPECTION REQUIREMENTS (WATER):

- 1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED, AS-BUILT, AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH APPLICABLE WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE OWNER'S ENGINEER AND APPLICABLE AGENCY INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.
- 2. CONTRACTOR SHALL ARRANGE FOR CHLORINATION AND BACTERIOLOGICAL SAMPLING, AND OBTAIN CLEARANCE OF DOMESTIC AND FIRE LINE WATER SYSTEM(S). COPIES OF ALL BACTERIOLOGICAL TEST RESULTS ARE TO BE SUBMITTED TO THE OWNER'S ENGINEER, IMMEDIATELY UPON COMPLETION OF THE WATER SYSTEM, FOR CERTIFICATION PURPOSES.

D FOR PERM

DRAWN BY: TC

APPROVED BY: TC

SIGNED BY: TC DRA'
ECKED BY: TC APPI



PRELIMINARY
NOT FOR
CONSTRUCTION

CIVIL ENGINEERS

EVELOPMENT ENGINEERS

FAMPA, FI 33626

TAKE 5 OIL CHANGE

OF MADISON HEIGHTS

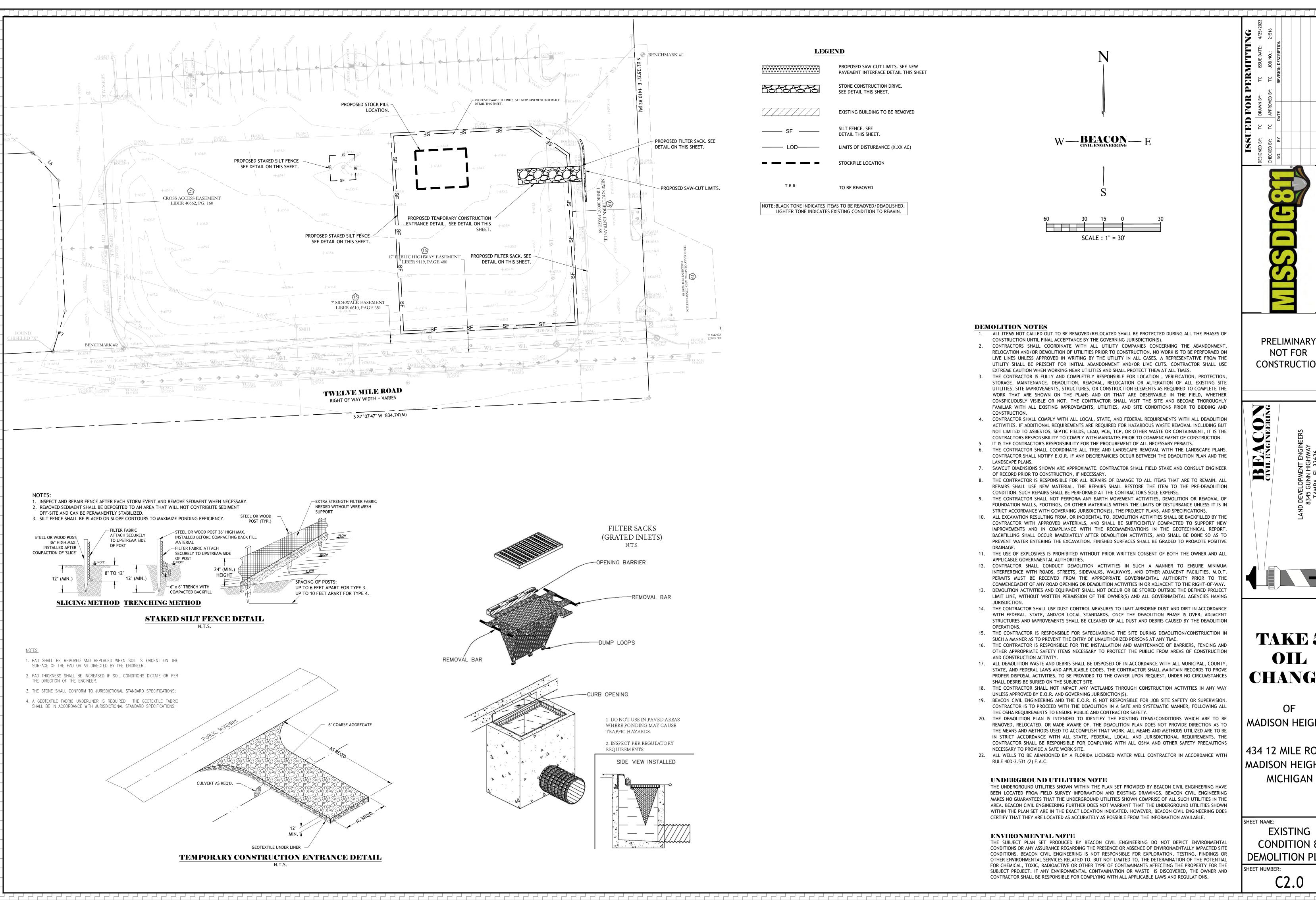
434 12 MILE ROAD MADISON HEIGHTS MICHIGAN

SHEET NAME:

CONSTRUCTION NOTES

SHEET NUMBER:

C1.0





PROPOSED SAW-CUT LIMITS. SEE NEW PAVEMENT INTERFACE DETAIL THIS SHEET STONE CONSTRUCTION DRIVE. 566666 SEE DETAIL THIS SHEET.

EXISTING BUILDING TO BE REMOVED

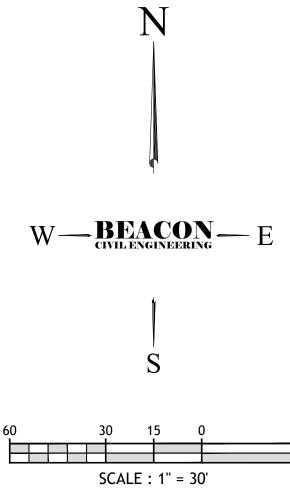
SILT FENCE. SEE

TO BE REMOVED

DETAIL THIS SHEET. LIMITS OF DISTURBANCE (X.XX AC)

STOCKPILE LOCATION

NOTE: BLACK TONE INDICATES ITEMS TO BE REMOVED/DEMOLISHED. LIGHTER TONE INDICATES EXISTING CONDITION TO REMAIN.



#### **DEMOLITION NOTES**

ALL ITEMS NOT CALLED OUT TO BE REMOVED/RELOCATED SHALL BE PROTECTED DURING ALL THE PHASES OF CONSTRUCTION UNTIL FINAL ACCEPTANCE BY THE GOVERNING JURISDICTION(S).

CONTRACTORS SHALL COORDINATE WITH ALL UTILITY COMPANIES CONCERNING THE ABANDONMENT RELOCATION AND/OR DEMOLITION OF UTILITIES PRIOR TO CONSTRUCTION. NO WORK IS TO BE PERFORMED ON LIVE LINES UNLESS APPROVED IN WRITING BY THE UTILITY IN ALL CASES. A REPRESENTATIVE FROM THE UTILITY SHALL BE PRESENT FOR INITIAL ABANDONMENT AND/OR LIVE CUTS. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR UTILITIES AND SHALL PROTECT THEM AT ALL TIMES.

THE CONTRACTOR IS FULLY AND COMPLETELY RESPONSIBLE FOR LOCATION, VERIFICATION, PROTECTION, STORAGE, MAINTENANCE, DEMOLITION, REMOVAL, RELOCATION OR ALTERATION OF ALL EXISTING SITE UTILITIES, SITE IMPROVEMENTS, STRUCTURES, OR CONSTRUCTION ELEMENTS AS REQUIRED TO COMPLETE THE WORK THAT ARE SHOWN ON THE PLANS AND OR THAT ARE OBSERVABLE IN THE FIELD, WHETHER CONSPICUOUSLY VISIBLE OR NOT. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING IMPROVEMENTS, UTILITIES, AND SITE CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION.

CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS WITH ALL DEMOLITION ACTIVITIES. IF ADDITIONAL REQUIREMENTS ARE REQUIRED FOR HAZARDOUS WASTE REMOVAL INCLUDING BUT NOT LIMITED TO ASBESTOS, SEPTIC FIELDS, LEAD, PCB, TCP, OR OTHER WASTE OR CONTAINMENT, IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH MANDATES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

IT IS THE CONTRACTOR'S RESPONSIBILITY FOR THE PROCUREMENT OF ALL NECESSARY PERMITS. THE CONTRACTOR SHALL COORDINATE ALL TREE AND LANDSCAPE REMOVAL WITH THE LANDSCAPE PLANS. CONTRACTOR SHALL NOTIFY E.O.R. IF ANY DISCREPANCIES OCCUR BETWEEN THE DEMOLITION PLAN AND THE

7. SAWCUT DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD STAKE AND CONSULT ENGINEER OF RECORD PRIOR TO CONSTRUCTION, IF NECESSARY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION. SUCH REPAIRS SHALL BE PERFORMED AT THE CONTRACTOR'S SOLE EXPENSE.

9. THE CONTRACTOR SHALL NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS IT IS IN

STRICT ACCORDANCE WITH GOVERNING JURISDICTION(S), THE PROJECT PLANS, AND SPECIFICATIONS. 10. ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES SHALL BE BACKFILLED BY THE CONTRACTOR WITH APPROVED MATERIALS, AND SHALL BE SUFFICIENTLY COMPACTED TO SUPPORT NEW IMPROVEMENTS AND IN COMPLIANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. BACKFILLING SHALL OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES, AND SHALL BE DONE SO AS TO PREVENT WATER ENTERING THE EXCAVATION, FINISHED SURFACES SHALL BE GRADED TO PROMOTE POSITIVE

11. THE USE OF EXPLOSIVES IS PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL

APPLICABLE GOVERNMENTAL AUTHORITIES. 12. CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. M.O.T. PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY PRIOR TO THE

COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY. 13. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT OCCUR OR BE STORED OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT WRITTEN PERMISSION OF THE OWNER(S) AND ALL GOVERNMENTAL AGENCIES HAVING

14. THE CONTRACTOR SHALL USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. ONCE THE DEMOLITION PHASE IS OVER, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION

15. THE CONTRACTOR IS RESPONSIBLE FOR SAFEGUARDING THE SITE DURING DEMOLITION/CONSTRUCTION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.

16. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING AND OTHER APPROPRIATE SAFETY ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITY. 17. ALL DEMOLITION WASTE AND DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY,

STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR SHALL MAINTAIN RECORDS TO PROVE PROPER DISPOSAL ACTIVITIES, TO BE PROVIDED TO THE OWNER UPON REQUEST. UNDER NO CIRCUMSTANCES SHALL DEBRIS BE BURIED ON THE SUBJECT SITE. 18. THE CONTRACTOR SHALL NOT IMPACT ANY WETLANDS THROUGH CONSTRUCTION ACTIVITIES IN ANY WAY

UNLESS APPROVED BY E.O.R. AND GOVERNING JURISDICTION(S). 19. BEACON CIVIL ENGINEERING AND THE E.O.R. IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SAFE AND SYSTEMATIC MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS TO ENSURE PUBLIC AND CONTRACTOR SAFETY.

20. THE DEMOLITION PLAN IS INTENDED TO IDENTIFY THE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED, RELOCATED, OR MADE AWARE OF. THE DEMOLITION PLAN DOES NOT PROVIDE DIRECTION AS TO THE MEANS AND METHODS USED TO ACCOMPLISH THAT WORK. ALL MEANS AND METHODS UTILIZED ARE TO BE IN STRICT ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.

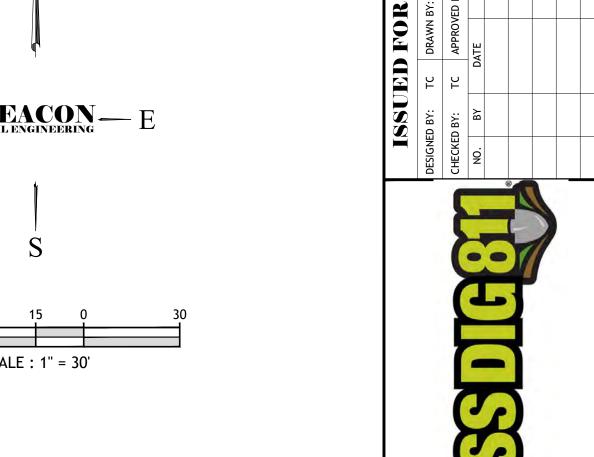
22. ALL WELLS TO BE ABANDONED BY A FLORIDA LICENSED WATER WELL CONTRACTOR IN ACCORDANCE WITH RULE 40D-3.531 (2) F.A.C.

# UNDERGROUND UTILITIES NOTE

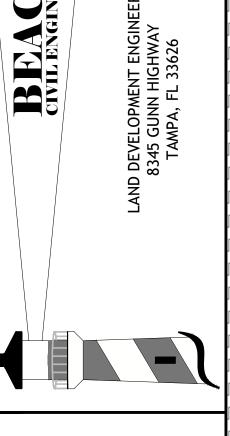
THE UNDERGROUND UTILITIES SHOWN WITHIN THE PLAN SET PROVIDED BY BEACON CIVIL ENGINEERING HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. BEACON CIVIL ENGINEERING MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE OF ALL SUCH UTILITIES IN THE AREA. BEACON CIVIL ENGINEERING FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN WITHIN THE PLAN SET ARE IN THE EXACT LOCATION INDICATED. HOWEVER, BEACON CIVIL ENGINEERING DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

# ENVIRONMENTAL NOTE

THE SUBJECT PLAN SET PRODUCED BY BEACON CIVIL ENGINEERING DO NOT DEPICT ENVIRONMENTAL CONDITIONS OR ANY ASSURANCE REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. BEACON CIVIL ENGINEERING IS NOT RESPONSIBLE FOR EXPLORATION, TESTING, FINDINGS OR OTHER ENVIRONMENTAL SERVICES RELATED TO, BUT NOT LIMITED TO, THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY FOR THE SUBJECT PROJECT. IF ANY ENVIRONMENTAL CONTAMINATION OR WASTE IS DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.



**PRELIMINARY** NOT FOR **CONSTRUCTION** 



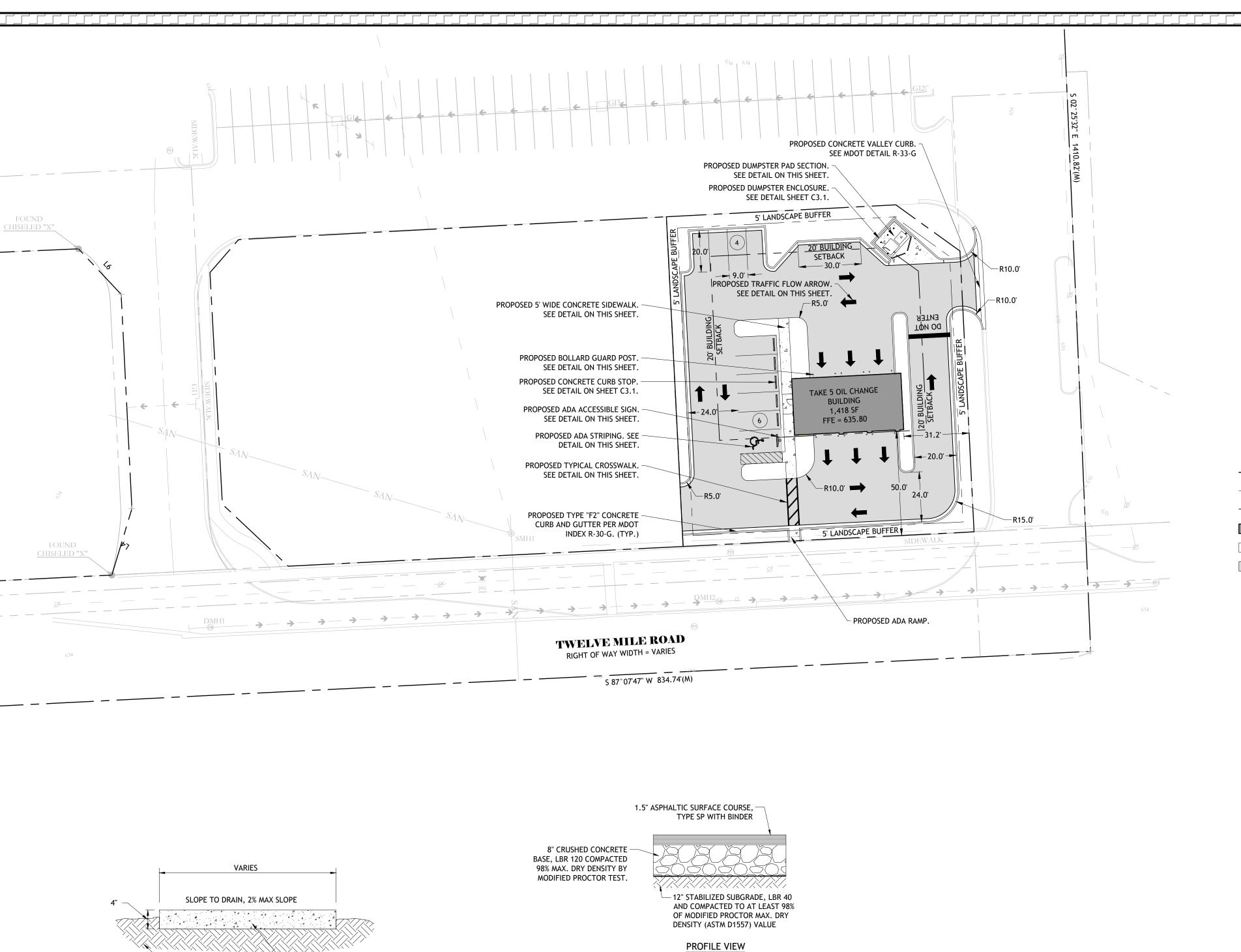
TAKE 5 **CHANGE** 

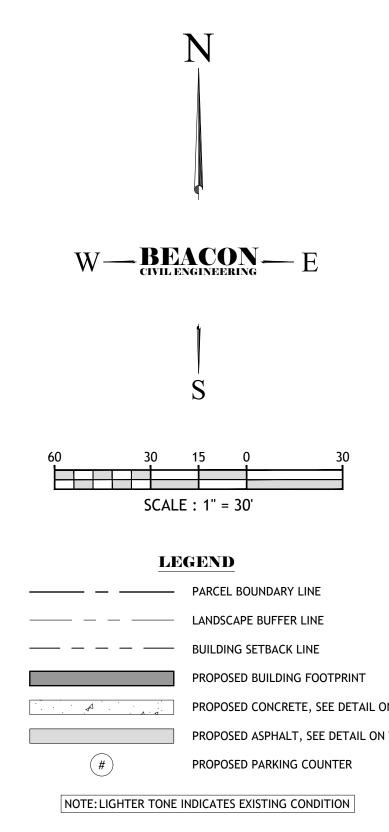
**MADISON HEIGHTS** 

434 12 MILE ROAD MADISON HEIGHTS **MICHIGAN** 

SHEET NAME: **EXISTING CONDITION & DEMOLITION PLAN** 

SHEET NUMBER:





# ZONING: **BUILDING:** FRONT: SIDE:

# PROPOSED CONCRETE, SEE DETAIL ON THIS SHEET. PROPOSED ASPHALT, SEE DETAIL ON THIS SHEET.

# **SITE INFORMATION:** SITE DATA

TOTAL SITE AREA: 0.50 AC (21,783 SF) ZONING JURISDICTION: MADISON HEIGHTS PARCEL ID #'s: 2511476015 VACANT COMMERCIAL EXISTING USE: PROPOSED USE: AUTOMOTIVE OIL CHANGE ZONE "X" PER FEMA FIRM PANEL FLOOD ZONE: NUMBER: 26125C0563F, DATED 9/29/2006 M-1 (LIGHT INDUSTRIAL)

BUILDING SQ. FOOTAGE: 1,418 SF FLOOR AREA RATIO (FAR):

**SETBACKS** 31.2' 80.8

PARKING/LOADING

3 SPACES + 1 SP/BAY + 1 SP/EMP + 1 SP/200 SF OF WAITING AREA PARKING CALCULATION: 3 SPACES + 3 SPACES (3 BAYS) + 4 SPACES (4 EMP) + 0 WAITING AREA

REQUIRED PARKING: 10 SPACES PROPOSED PARKING: 10 SPACES (9' x 20') 1 ADA SPACES (9' x 20')

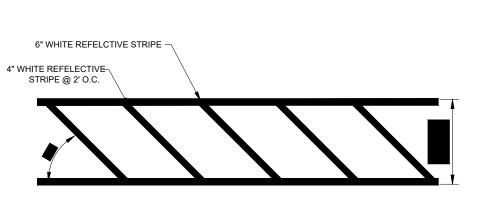
TOTAL PROPOSED PARKING: 10 SPACES

### SITE NOTES

- 1. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING IMPROVEMENTS AND TREES AND OTHER DEBRIS WITHIN THE LIMITS OF THE WORK FROM THE SITE. ON SITE BURIAL OF TREES AND OTHER DEBRIS WILL NOT BE ALLOWED. THERE ARE NO KNOWN INERT BURY PITS ON THE SITE AND NONE WILL BE ALLOWED DURING THE CONSTRUCTION OF THE PROJECT.
- ALL WORK SHALL COMPLY WITH ALL GOVERNING JURISDICTIONS, STATE OF MICHIGAN, AND FEDERAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER. ALL WORK SHALL BE PERFORMED IN A FINISHED AND WORKMANLIKE MANNER TO THE ENTIRE
- ALL MATERIALS SHALL BE NEW UNLESS USED OR SALVAGED MATERIALS ARE AUTHORIZED BY THE OWNER 5. ALL WORK PERFORMED ON CITY, COUNTY, AND/OR STATE OR FEDERAL RIGHT-OF-WAY SHALL BE IN

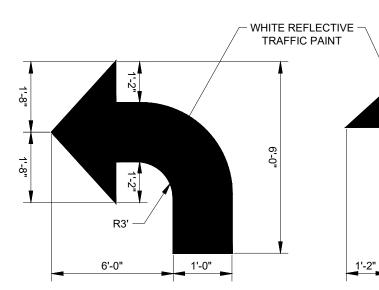
SATISFACTION OF THE OWNER, AND IN ACCORDANCE WITH THE BEST RECOGNIZED TRADE PRACTICES.

- STRICT CONFORMANCE WITH APPLICABLE STANDARDS AND SPECIFICATIONS OF THE APPROPRIATE GOVERNING AGENCIES. 6. BASE COURSE MATERIALS, EQUIPMENT, METHODS OF CONSTRUCTION AND WORKMANSHIP SHALL
- CONFORM TO "STATE OF MICHIGAN TRANSPORTATION STANDARD SPECIFICATIONS", CURRENT EDITION. ALL BUILDING DIMENSIONS SHALL BE CHECKED AND COORDINATED WITH THE ARCHITECTURAL PLANS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 8. SEE SHEET C3.1 FOR DETAILS. 9. ALL DISTURBED AREAS WITHIN SIDEWALK/ CURB AND GUTTER/ ROAD PAVEMENT SHALL BE RESTORED TO
- ITS ORIGINAL OR BETTER CONDITIONS. 10. ALL DIMENSION ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
- 11. THE PROPOSED DEVELOPMENT SHALL NOT IMPACT GROUND AND SURFACE WATER FLOWS ADJACENT TO
- 12. THE PROPOSED DEVELOPMENT SHALL NOT IMPACT ANY FLOODWAYS ADJACENT TO THE SITE. 13. BASE ON MICHIGAN BUILDING CODE (2001) THIS SITE IS LOCATED IN A ZONE OF ZERO SEISMIC
- 14. ALL SIDEWALKS SHALL HAVE A WIDTH OF 5 FEET, UNLESS OTHERWISE NOTED.
- 15. ALL RADII SHALL BE 3 FEET, UNLESS OTHERWISE NOTED.



1. CROSSWALK ALONG AN ACCESSIBLE ROUTE SHALL MAINTAIN A SLOPE OF 2% MAX. IN ALL DIRECTIONS

# TYPICAL CROSSWALK



TRAFFIC FLOW ARROWS

# MUTCD R7-8 12"X18" -MUTCD R7-8P 12"X6" -W/ GALVANIZED WATERPROOF CAP CONTRACTOR TO PROVIDE -PLASTIC BOLLARD COVER (ADA BLUE WITH REFLECTIVE) STRIPE). GLOBAL INDUSTRIES BOLLARD POST SLEEVE OR APPROVED EQUIVALENT. 6" Ø STEEL PIPE. FILL W/ ----NON-SHRINK GROUT AROUND 2" Ø PIPE PAVEMENT : 1/2" PREMOLDED **EXPANSION JOINT FILLER** WITH SEALANT (WHEN

PLACED IN PAVEMENT)

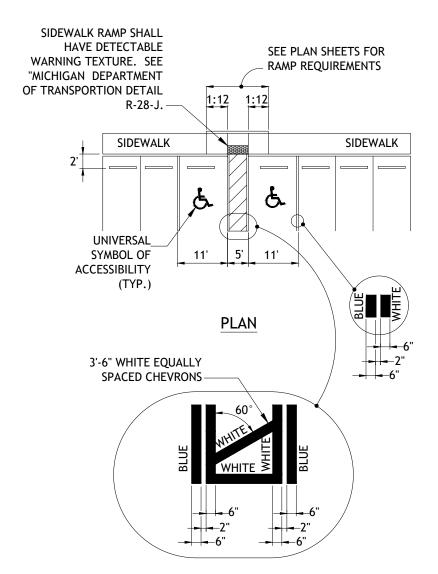
. REFER TO DIMENSIONS CONTROL PLAN FOR PROPOSED SIGN LOCATIONS.
2. ALL ACCESSIBLE SIGNS SHALL BE MOUNTED AT A MINIMUM OF 5' FROM GRADE TO THE BOTTOM EDGE OF THE LOWEST POSTED SIGN. THE MINIMUM MOUNTING HEIGHT SHALL BE INCREASED TO 7' FROM FINISHED GRADE WHEN PLACED IN A CROWN TOP WITH PEDESTRIAN PATHWAY 3. SIGN AND INSTALLATION TO BE IN ACCORDANCE W/ ALL ADA. STATE AND CITY CODES. CONTRACTOR SHALL VERIFY COMPLIANCE W/ ALL CODES BEFORE FABRICATION. 4. PROVIDE SIGNAGE BACK TO BACK AT LOCATIONS WITH ACCESSIBLE SPACES ON BOTH SIDES. \* PROVIDE VAN ACCESSIBLE SIGN FOR ANY VAN ACCESSIBLE STALLS -FINISHED

ACCESSIBLE SIGN IN BOLLARD

18" (MIN.)

- CAST-IN-PLACE

CONCRETE FOOTING (3,000 P.S.I.)



STRIPING DETAILS

# TAKE 5

**PRELIMINARY** 

NOT FOR

CONSTRUCTION

OIL **CHANGE** 

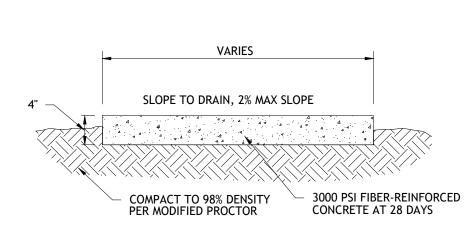
MADISON HEIGHTS

434 12 MILE ROAD **MADISON HEIGHTS MICHIGAN** 

SHEET NAME:

SITE PLAN

SHEET NUMBER:



SIDEWALK SECTION

4,000 PSI CONCRETE @ 6" MINIMUM THICKNESS REINFORCED #3 BARS ON 24" CTRS. BOTH WAYS \_ | | | \_ \_ \_ | | | \_ \_ \_ | | | \ -

12" STABILIZED SUBGRADE, LBR 40 — AND COMPACTED TO AT LEAST 98% OF MODIFIED PROCTOR MAX. DRY DENSITY (ASTM D1557) VALUE

SUBGRADE SOILS MUST BE DENSIFIED TO AT LEAST 98% MPMDD TO A DEPTH OF AT LEAST 1-FOOT DIRECTLY BELOW THE BOTTOM OF CONCRETE SLAB. THE SURFACE OF THE SUBGRADE SOILS MUST BE SMOOTH, AND ANY DISTURBANCES OR WHEEL RUTTING CORRECTED PRIOR TO PLACEMENT OF CONCRETE.

THE SUBGRADE SOILS MUST BE MOISTENED PRIOR TO PLACEMENT OF CONCRETE. CONCRETE PAVEMENT THICKNESS SHOULD BE UNIFORM THROUGHOUT, WITH

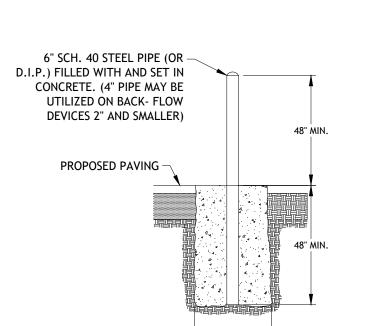
EXCEPTION TO THE THICKENED EDGES (CURB OR FOOTING). THE BOTTOM OF THE PAVEMENT SHOULD BE SEPARATED FROM THE ESTIMATED SHWT LEVEL BY AT LEAST 24 INCHES. SLAB THICKNESS FOR STANDARD DUTY CONCRETE PAVEMENTS ARE BASED ON (1)

THE SUBGRADE SOILS DENSIFIED TO AT LEAST 98% MPMDD, (2) MODULUS OF

SUBGRADE REACTION (K) EQUAL TO 150 PCI, (3) A 30-YEAR DESIGN LIFE, AND (4)

TOTAL EQUIVALENT 18 KIP SINGLE AXLE LOADS (ESAL) OF 45,000. 7. MAXIMUM CONTROL JOINT SPACING SHALL BE 10'x10'.

CONCRETE DUMPSTER PAD SECTION



ASPHALT NOTES

1. THE ASPHALT SURFACE COURSE SHOULD CONFORM TO THE MOST RECENT EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.

2. THE BASE COURSE SHOULD CONFORM TO THE LATEST EDITION OF FDOT ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS SUPPLEMENTAL SECTION

204. BASE COURSE SHALL BE COMPACTED TO 98% OF THE MODIFIED

3. ASPHALT SHOULD BE COMPACTED TO A MINIMUM OF 93% OF LABORATORY

5. CRUSHED CONCRETE SHALL BE SOURCED FROM APPROVED FDOT SUPPLIER.

ASPHALT PAVEMENT SECTION

METHODS WITH IND. TEST TOLERANCE OF +2% AND -1.2% OF DESIGN Gmm.

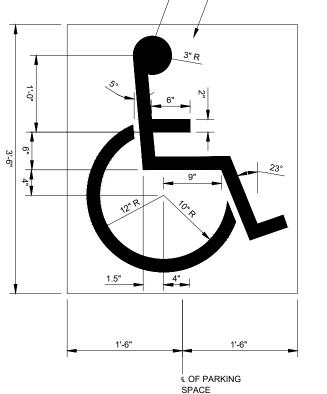
MAXIMUM DESIGN MIX DENSITY DETERMINED FROM SPECIFIC GRAVITY

4. PLASTIC CLAY SHALL NOT BE ALLOWED TO STABILIZE THE SUBGRADE.

PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY.

INSTALLATION

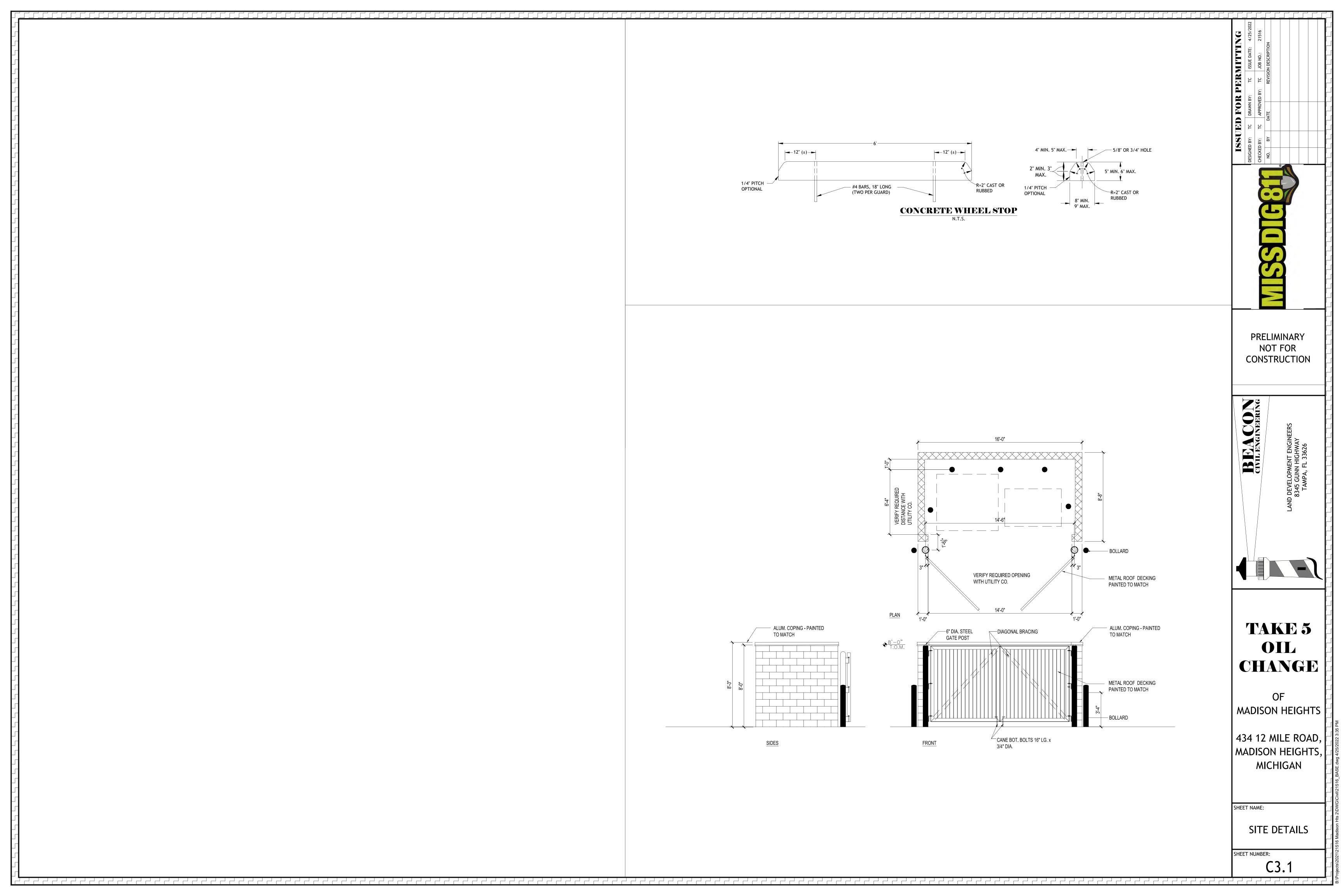
**BOLLARD GUARD POST** 

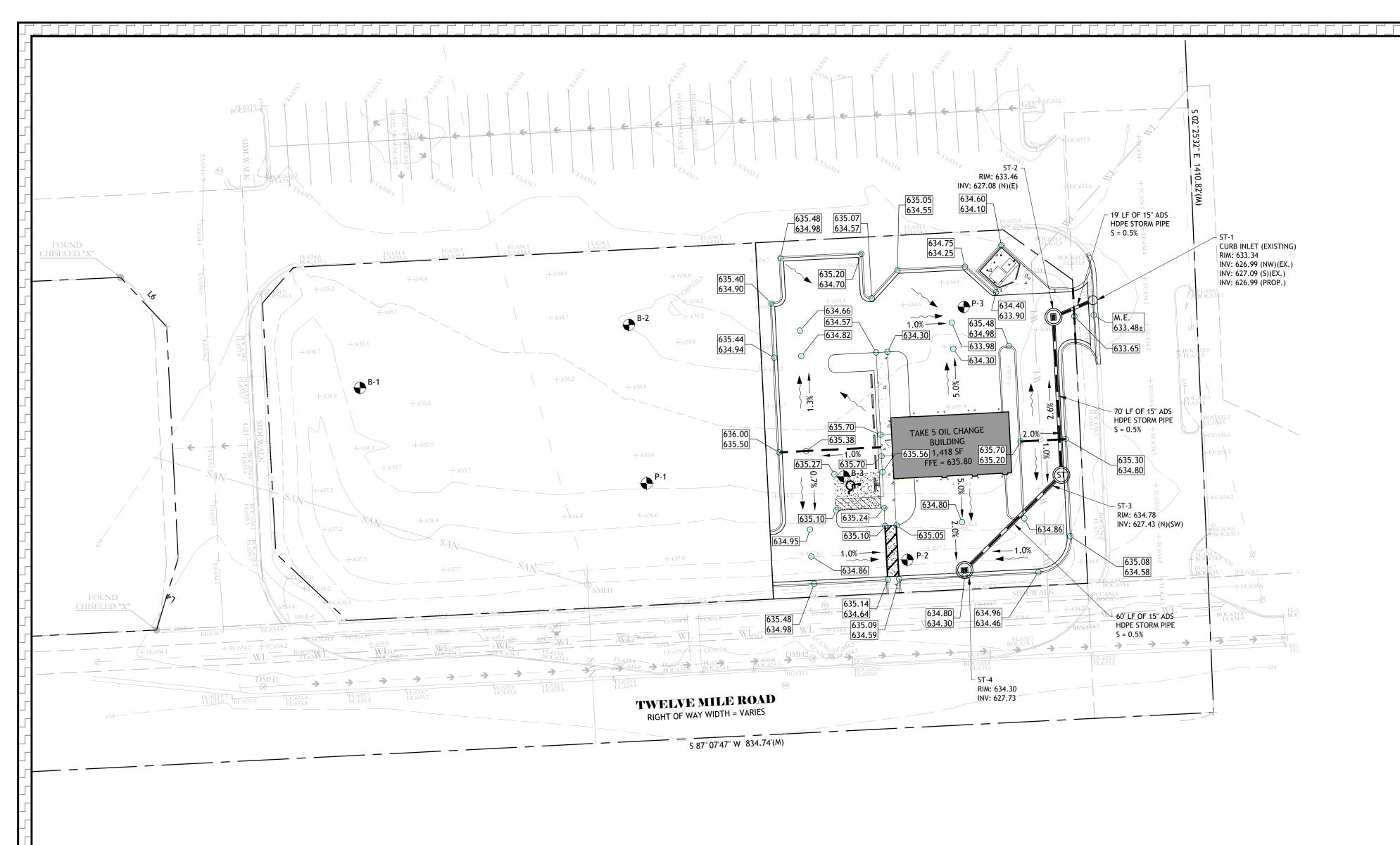


- WHITE REFLECTIVE PAINT (TYP.)

\_BLUE PAINT (TYP.)

ACCESSIBLE PARKING LOGO







	PROPOSED STORMWATER PIPE
	PROPOSED STANDARD CATCH BASIN TYPE "B", SEE SHEET C4.1
(ST)	PROPOSED STANDARD STORM MANHOLE, SEE SHEET C4.1
	ADA PARKING STALLS. 2% MAX SLOPES IN ALL DIRECTIONS
⊗ 1.00	PROPOSED SPOT ELEVATION
	PROPOSED TOP OF CURB/BOTTOM OF CURB SPOT ELEVATION
⊗ M.E. ±1.00	MATCH EXISTING ELEVATION
#% ——	PROPOSED SLOPE INDICATOR
~~ <b>~</b>	DIRECTIONAL DRAINAGE FLOW ARROW
HA-#	GEOTECH BORING LOCATION. SEE GEOTECH REPORT FOR DETAILS.
	PROPOSED RIDGE LINE

#### EXISTING PERVIOUS/IMPERVIOUS PERVIOUS

OPEN SPACE:	21,783 SF/ 0.50 AC/ 100%
TOTAL PERVIOUS AREA:	21,783 SF/ 0.50 AC/ 100%
IMPERVIOUS	
BUILDING AREA:	0 SF/ 0 AC/ 0%
ASPHALT PAVEMENT AREA:	0 SF/ 0 AC/ 0%
CONCRETE PAVEMENT AREA:	0 SF/ 0 AC/ 0%

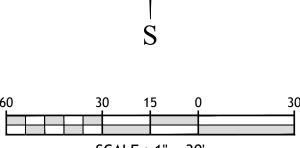
#### SIDEWALK AREA: 0 SF/ 0 AC/ 0% TOTAL IMPERVIOUS AREA: 0 SF/ 0 AC/ 0% PROPOSED PERVIOUS/IMPERVIOUS

PERVIOUS

LANDSCAPE AREA:	5,928 SF/ 0.14 AC/ 28%
TOTAL PERVIOUS AREA:	5,928 SF/ 0.14 AC/ 28%
IMPERVIOUS	

BUILDING AREA:	1,418 SF/ 0.03 AC/ 6%
ASPHALT PAVEMENT AREA:	13,700 SF/ 0.31 AC/ 62%
CONCRETE PAVEMENT AREA:	337 SF/ 0.01 AC/ 2%
SIDEWALK AREA:	400 SF/ 0.01 AC/ 2%
TOTAL IMPERVIOUS AREA:	15,855 SF/ 0.36 AC/ 72%





GRADING & DRAINAGE NOTES

JURISDICTIONAL LAND DISTURBANCE PERMIT SHALL BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND BE VISIBLE TO THE PUBLIC.

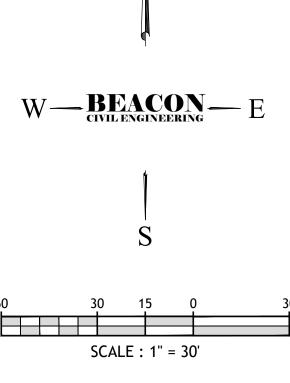
- 2. TWO PERMANENT BENCHMARKS ON-SITE SHALL BE ESTABLISHED BY CONTRACTOR PRIOR TO STARTING CONSTRUCTION.
- 3. PROPOSED SPOT ELEVATIONS ARE TO THE TOP OF PAVEMENT UNLESS OTHERWISE
- 4. ALL REQUIRED FILL SHALL BE CLEAN, SUITABLE MATERIAL.
- 5. ALL AREAS DISTURBED OUTSIDE LIMITS OF GRADING SHOWN ON THE PLANS SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER BY THE CONTRACTOR.
- 6. CONTRACTOR SHALL MEET AND MATCH EXISTING (M.E.) PAVEMENT ALONG SAW-CUT
- 7. LENGTH OF PROPOSED RIP-RAP PADS AT PIPE OUTLET STRUCTURES SHALL BE A MINIMUM LENGTH OF SIX TIMES THE DIAMETER OF THE PIPE, IF APPLICABLE.
- 8. ALL FILL SHOULD BE PLACED IN THIN, HORIZONTAL LOOSE LIFTS, MAXIMUM 6 INCHES, AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). A FLORIDA REGISTERED PROFESSIONAL SOILS ENGINEER SHALL CERTIFY THE SOIL COMPACTION PRIOR TO THE INSTALLATION OF PAVEMENTS, CURBS, SIDEWALKS OR FOOTINGS OF ANY TYPE. COMPACTION OF THE UPPER 8 INCHES OF SOIL BENEATH PAVEMENTS AND SLAB-ON-GRADE SHOULD BE COMPACTED TO AT
- 9. STORMWATER PONDS AND OUTLET STRUCTURES SHALL BE FULLY CONSTRUCTED AND OPERATIONAL PRIOR TO ANY OTHER CONSTRUCTION OR GRADING ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- 10. REFER TO LANDSCAPE PLAN FOR REQUIRED TREE AND GROUND COVER PLANTINGS.
- 11. SURFACE GRADE SLOPES SHALL BE A MINIMUM OF 1.00% 12. 4:1 MAXIMUM CUT AND FILL SLOPES
- 13. ADA ACCESSIBLE AREAS SHALL NOT HAVE A MAXIMUM CROSS-SLOPE THAT EXCEEDS 2.00% AND MAX LONGITUDINAL SLOPE OF 5.00% UNLESS A RAMP IS SPECIFIED. IF DISCREPANCIES OCCUR CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD IMMEDIATELY TO CONFIRM DESIGN TO ENSURE ADA ACCESSIBLE STANDARDS ARE MET.
- 14. ALL TRENCHING AND BACKFILL OPERATIONS SHALL COMPLY WITH GOVERNING JURISDICTIONAL STANDARDS. SEE SHEET C4.1 FOR PIPE TRENCHING DETAILS.
- 15. SEE SHEET C4.1 FOR DETAILS. 16. ALL INLET GRATES SUBJECTED TO VEHICLE LOADING SHALL MEET H-20 TRAFFIC LOADING STANDARDS.

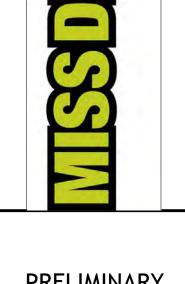
# **BUILDING ACCESS AND PROTECTION NOTES**

- 1. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AROUND AND TO ALL BUILDINGS UNDER CONSTRUCTION WITH A MINIMUM WIDTH OF 20 FT. THE ACCESS TO BUILDINGS WITH SPRINKLER OR STANDPIPE SYSTEMS SHALL BE WITHIN 40
- FT OF THE FIRE DEPARTMENT CONNECTION ACCORDING TO NFPA 1141 3-1. 2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING IN ALL AREAS

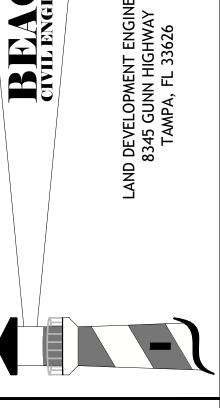
VERTICAL DATUM ELEVATIONS SHOWN HEREIN ARE BASED ON THE (NAVD) 88 AND SAID

ELEVATIONS ARE BASED ON BENCHMARKS RESEARCHED BY THE SURVEYOR





**PRELIMINARY** NOT FOR **CONSTRUCTION** 



TAKE 5 OIL **CHANGE** 

MADISON HEIGHTS

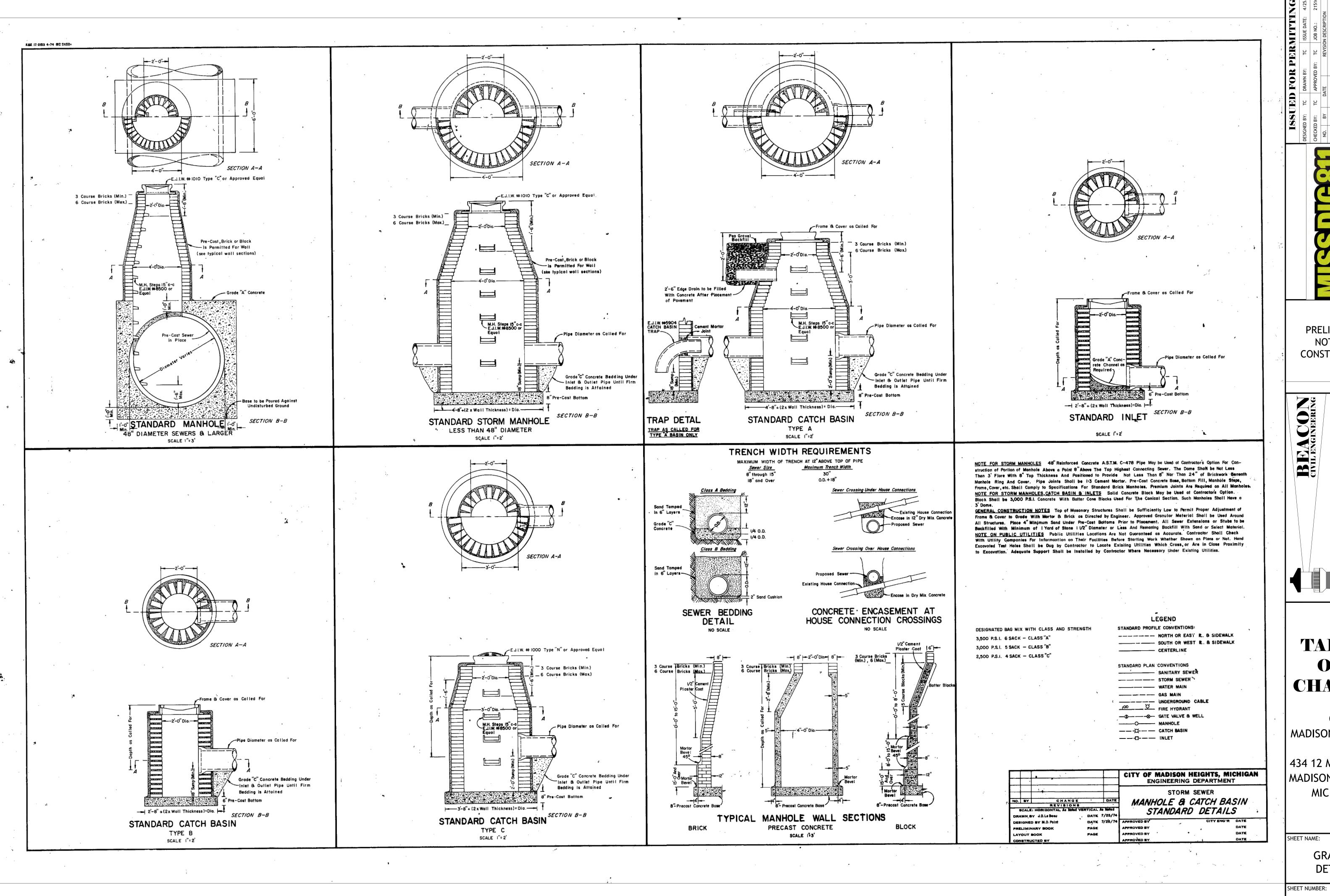
434 12 MILE ROAD, MADISON HEIGHTS, **MICHIGAN** 

SHEET NAME:

**GRADING &** DRAINAGE PLAN

SHEET NUMBER:

C4.0



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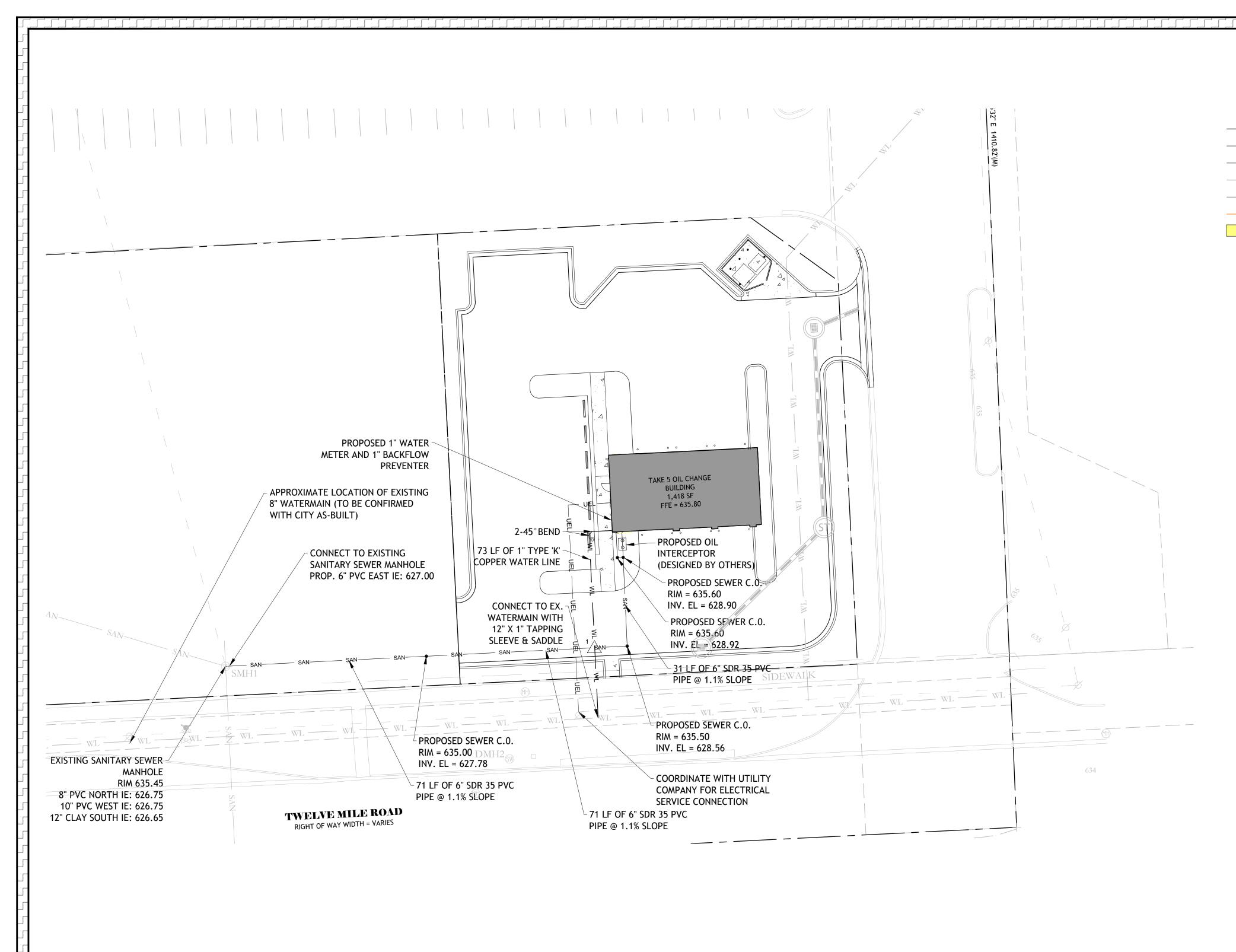
TAKE 5 OIL **CHANGE** 

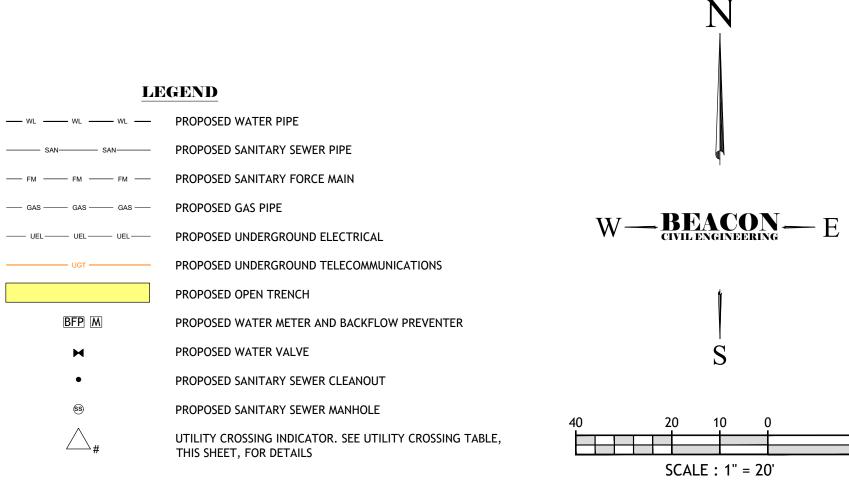
MADISON HEIGHTS

434 12 MILE ROAD MADISON HEIGHTS. MICHIGAN

**GRADING DETAILS** 

C4.1





UTILITY NOTES

WATER

630.50

REFER TO SHEET C-5.1 FOR UTILITY DETAILS.

REFER TO MEP PLANS FOR ALL UTILITY LEADS INTO BUILDING. SANITARY SEWER PIPES SHALL HAVE A MINIMUM SLOPE OF 1.00%.

4. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND THEIR LOCATIONS AND ELEVATIONS. IF ANY DISCREPANCIES OCCUR, THE CONTRACTOR SHALL ALERT ENGINEER IMMEDIATELY.

5. ALL PUBLIC UTILITIES INSPECTIONS SHALL BE SCHEDULED BY THE CONTRACTOR AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.

6. ALL DEMOLITION AND CONSTRUCTION WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE WITH

GOVERNING JURISDICTIONAL CODES. 7. ALL UTILITY CONDUIT MATERIAL FOR TELEPHONE, CABLE, AND ELECTRIC SHALL BE INSTALLED PER

UTILITY PROVIDER SPECIFICATIONS BY THE CONTRACTOR. 8. CONTRACTOR SHALL BUILD CONCRETE TRANSFORMER PAD AND INSTALL SCHEDULE 80 PVC CONDUIT AND

PULL STRING WITH SWEEPING BENDS, IF APPLICABLE BY ELECTRIC COMPANY. 9. ALL SANITARY GRAVITY PIPES, SERVICE LATERALS, AND FITTINGS SHALL BE MATERIALS APPROVED BY THE GOVERNING JURISDICTION.

10. ALL NON-METALLIC PIPE WILL BE INSTALLED WITH 2 PAIR, 10 GAUGE, COPPER TRACE WIRE. 11. CONTRACTOR SHALL COORDINATE WITH GOVERNING JURISDICTION(S) FOR ANY PROPOSED WET TAPS

AND R.O.W. CONNECTIONS. 12. ALL UTILITIES SHALL MAINTAIN AT LEAST 4 FEET OF COVER FROM TOP OF PIPE TO SURFACE ELEVATION.

CONTRACTOR SHALL DEFLECT WATER AND FORCE MAINS AS NECESSARY TO ACHIEVE MINIMUM GOVERNING JURISDICTION(S) SEPARATION REQUIREMENTS.

13. CONTRACTOR MUST COORDINATE THE SHUTDOWN OF THE EXISTING POTABLE WATER, WASTEWATER FORCEMAIN, OR RECLAIMED WATER MAIN WITH GOVERNING JURISDICTION(S), IF NECESSARY. 14. OVER STORY TREES SHALL NOT BE LOCATED WITHIN 12 FT OF ANY PUBLIC UNDERGROUND OR OVERHEAD

UTILITY LINE.

15. CONTRACTOR SHALL VERIFY LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION,

16. CONTRACTOR SHALL PROTECT ALL UTILITIES OUTSIDE LIMITS OF CONSTRUCTION UNLESS OTHERWISE

NOTED IN THE CONSTRUCTIONS PLANS OR SPECIFICATIONS. 17. ALL DISTURBED AREAS WITHIN THE SIDEWALK/ CURB AND GUTTER/ ROAD PAVEMENT SHALL BE

RESTORED TO ITS ORIGINAL OR BETTER CONDITIONS.

18. THE SANITARY SEWER SYSTEM IN ALL ITS ENTIRETY IS PRIVATELY OWNED AND MAINTAINED WITHIN PROPERTY BOUNDARIES.

19. THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT. THE REFLECTIVE MARKER WILL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT, IF

20. IF APPLICABLE, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING

OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE GOVERNING JURISDICTION(S) RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO GOVERNING JURISDICTION(S) PRIOR TO THE FINAL INSPECTION OF THE PROJECT. THE CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR CODING METHODS AND PROCEDURES.

21. ALL PROPOSED WATER SUPPLY AND FIRE HYDRANTS SHALL COMPLY NFPA-1, CHAPTER 18.3 22. CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD (E.O.R.) 72 HOURS IN ADVANCE OF ALL INSPECTIONS

628.93

1.57'

THAT REQUIRE THE E.O.R. OR E.O.R. REPRESENTATIVE'S PRESENCE.

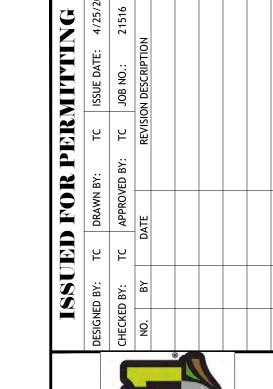
23. CONTRACTOR SHALL DEFLECT ALL PROPOSED WATER MAINS AND FORCE MAINS TO ACHIEVE 18" MIN. VERTICAL CLEARANCE FROM ALL EXISTING AND PROPOSED UTILITIES.

24. CONTRACTOR SHALL ADJUST TOP OF ALL CLEANOUTS, VALVES, AND STRUCTURE RIMS TO BE FLUSH WITH FINAL GRADE.

25. ALL TRENCHING AND BACKFILL OPERATIONS SHALL COMPLY WITH GOVERNING JURISDICTIONAL STANDARDS. SEE SHEET C-5.1 FOR PIPE TRENCHING DETAILS.

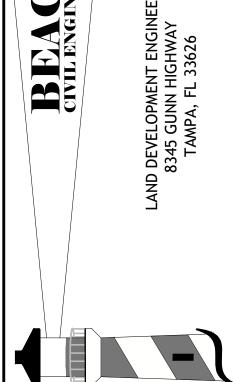
CROSSING NUMBER | TOP UTILITY | BOTTOM OF TOP UTILITY | BOTTOM UTILITY | TOP OF BOTTOM UTILITY CLEARANCE

SANITARY





**PRELIMINARY** NOT FOR CONSTRUCTION



TAKE 5 OIL **CHANGE** 

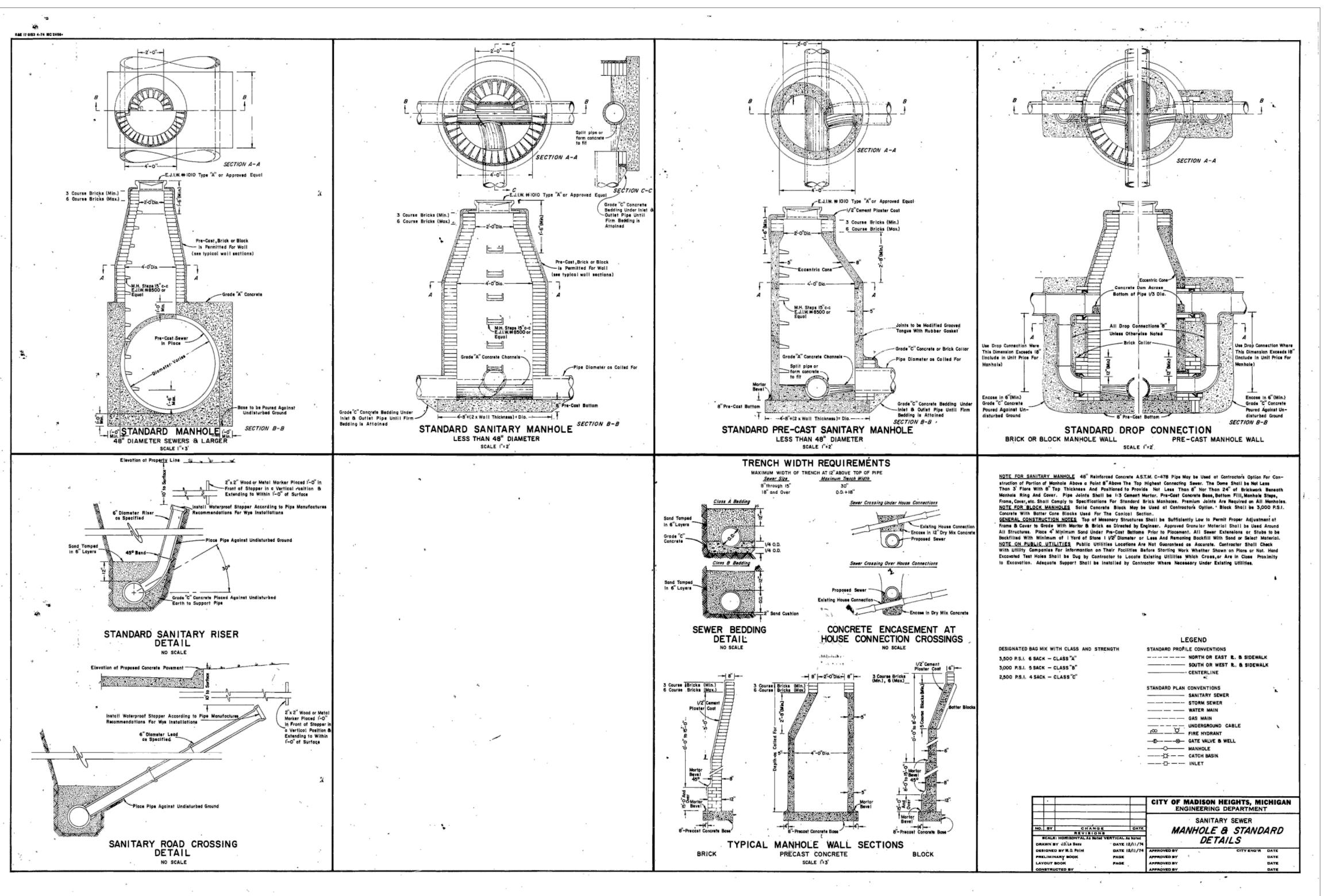
MADISON HEIGHTS

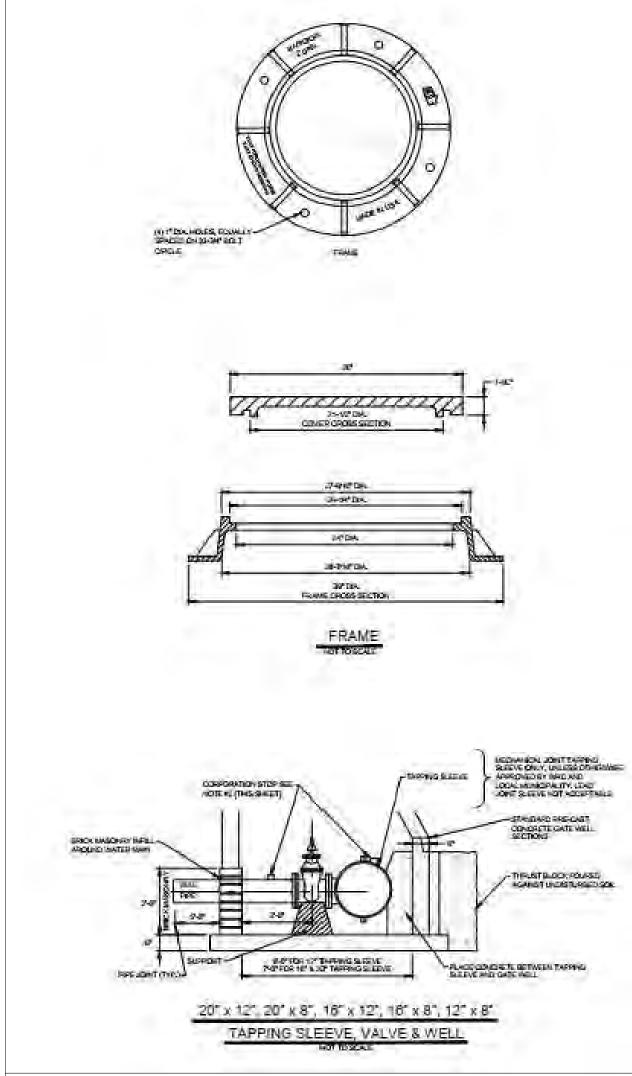
434 12 MILE ROAD, MADISON HEIGHTS, MICHIGAN

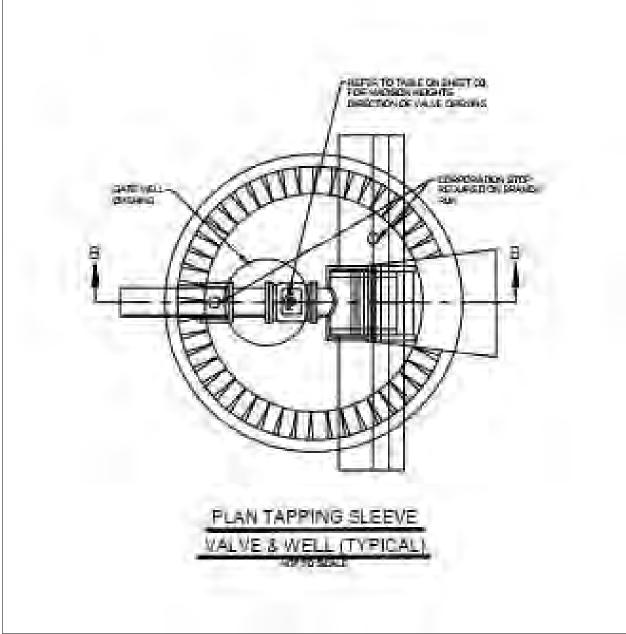
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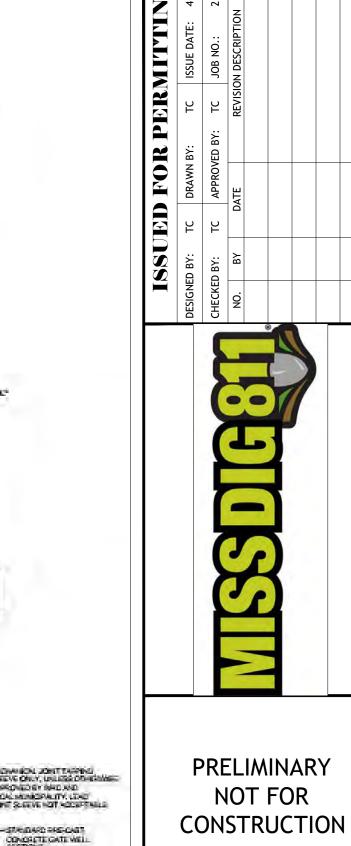
UTILITY PLAN

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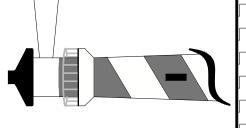








CIVIL ENGINEERI
CIVIL ENGINEERI
LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626



TAKE 5
OIL
CHANGE

OF MADISON HEIGHTS

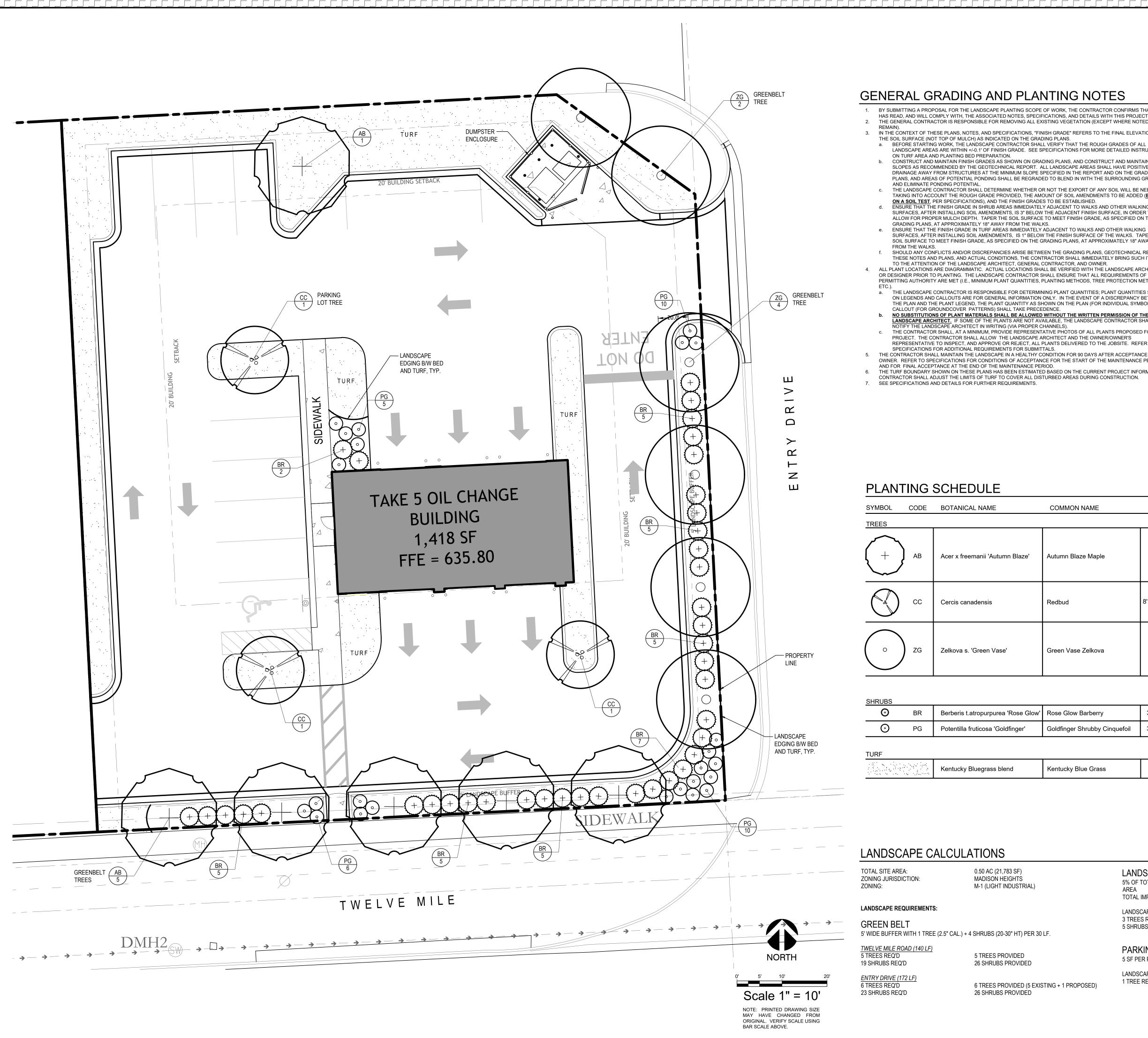
434 12 MILE ROAD, MADISON HEIGHTS, MICHIGAN

SHEET NAME:

UTILITY DETAILS

SHEET NUMBER:

C5.1



# GENERAL GRADING AND PLANTING NOTES

- 1. BY SUBMITTING A PROPOSAL FOR THE LANDSCAPE PLANTING SCOPE OF WORK, THE CONTRACTOR CONFIRMS THAT HE HAS READ, AND WILL COMPLY WITH, THE ASSOCIATED NOTES, SPECIFICATIONS, AND DETAILS WITH THIS PROJECT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO
- 3. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
- LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES
- THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (BASED
- ON A SOIL TEST, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS. e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING
- SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS
- TO THE ATTENTION OF THE LANDSCAPE ARCHITECT GENERAL CONTRACTOR AND OWNER ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS,
- a. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES; PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUNDCOVER PATTERNS) SHALL TAKE PRECEDENCE.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL
- NOTIFY THE LANDSCAPE ARCHITECT IN WRITING (VIA PROPER CHANNELS). THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE REPRESENTATIVE PHOTOS OF ALL PLANTS PROPOSED FOR THE PROJECT. THE CONTRACTOR SHALL ALLOW THE LANDSCAPE ARCHITECT AND THE OWNER/OWNER'S REPRESENTATIVE TO INSPECT, AND APPROVE OR REJECT, ALL PLANTS DELIVERED TO THE JOBSITE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SUBMITTALS.
- THE CONTRACTOR SHALL MAINTAIN THE LANDSCAPE IN A HEALTHY CONDITION FOR 90 DAYS AFTER ACCEPTANCE BY THE OWNER. REFER TO SPECIFICATIONS FOR CONDITIONS OF ACCEPTANCE FOR THE START OF THE MAINTENANCE PERIOD, AND FOR FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD. 6. THE TURF BOUNDARY SHOWN ON THESE PLANS HAS BEEN ESTIMATED BASED ON THE CURRENT PROJECT INFORMATION. CONTRACTOR SHALL ADJUST THE LIMITS OF TURF TO COVER ALL DISTURBED AREAS DURING CONSTRUCTION.

# **ROOT BARRIERS**

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY

# **MULCHES**

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 3" THICK LAYER OF 1-1/2" SHREDDED WOOD MULCH, NATURAL (UNDYED), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS (EXCEPT FOR TURF AND SEEDED AREAS). CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED (SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE "GENERAL GRADING AND PLANTING NOTES" AND SPECIFICATIONS).

**PRELIMINARY** NOT FOR CONSTRUCTION

TAKE 5 OIL **CHANGE** 

**MADISON HEIGHTS** 

434 12 MILE ROAD MADISON HEIGHTS, **MICHIGAN** 

PARKING LOT LANDSCAPING 5 SF PER PARKING SPACE + 1 TREE PER 100 SF OF REQ'D LANDSCAPE

5% OF TOTAL IMPERVIOUS AREA + 1 TREE AND 2 SHRUBS PER 400 SF OF REQ'D LANDSCAPE

LANDSCAPE AREA PROVIDED: 4,915 SF 3 TREES PROVIDED

7 SHRUBS PROVIDED

LANDSCAPING REQUIRED: 50 SF LANDSCAPING PROVIDED: 1088 SF 1 TREE REQ'D 1 TREE PROVIDED



LANDSCAPE PLAN

SHEET NUMBER:

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	MIN. SIZE	QTY.	REMARKS
TREES				<del>,</del>		
+	AB	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5" cal. min.	6	Matched specimen
	CC	Cercis canadensis	Redbud	8' ht, 2.5" cal. min.	3	Specimen, multi-stem, 3-5 stems
0	ZG	Zelkova s. 'Green Vase'	Green Vase Zelkova	2.5" cal. min.	6	Matched specimen

SHRUBS

_	<b>①</b>	BR	Berberis t.atropurpurea 'Rose Glow'	Rose Glow Barberry	3 gallon, 24" ht.	39	Matched full hedge plants, spaced 48" o.c.
	0	PG	Potentilla fruticosa 'Goldfinger'	Goldfinger Shrubby Cinquefoil	3 gallon, 20" ht.	24	Matched, full, spaced per plan

Kentucky Bluegrass blend Kentucky Blue Grass Min. one year old, uniform color and texture

LANDSCAPE AREA

5 SHRUBS REQ'D

TOTAL IMPERVIOUS AREA: 16,867 SF

LANDSCAPE AREA REQUIRED: 843 SF

# LANDSCAPE CALCULATIONS

TOTAL SITE AREA: ZONING JURISDICTION:

0.50 AC (21,783 SF) MADISON HEIGHTS M-1 (LIGHT INDUSTRIAL)

5 TREES PROVIDED

26 SHRUBS PROVIDED

# LANDSCAPE REQUIREMENTS:

**GREEN BELT** 5' WIDE BUFFER WITH 1 TREE (2.5" CAL.) + 4 SHRUBS (20-30" HT) PER 30 LF.

TWELVE MILE ROAD (140 LF) 5 TREES REQ'D 19 SHRUBS REQ'D

ENTRY DRIVE (172 LF) 6 TREES REQ'D

6 TREES PROVIDED (5 EXISTING + 1 PROPOSED) 26 SHRUBS PROVIDED

## PLANTING SPECIFICATIONS

#### **GENERAL**

- A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR
- ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING. 2. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
- THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID CONTRACTOR'S LICENSE ISSUED BY THE APPROPRIATE LOCAL JURISDICTION. B. SCOPE OF WORK WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS
- LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND

(WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF

REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES

## PRODUCTS

#### ALL MANUFACTURED PRODUCTS SHALL BE NEW.

- CONTAINER AND BALLED-AND-BURLAPPED PLANTS FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMACTIC CONDITIONS
- 2. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS
- TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED
- ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL
- ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING
- 6. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER
- MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL. WHERE CALIPER MEASUREMENTS ARE USED, THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS.
- ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.
- SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.
- SEED: PROVIDE CERTIFIED BLUEGRASS/FESCUE/PERENNIAL RYE SEED MIX, APPLIED AT THE RATE OF 7 SEED SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH AOSA'S "RULES FOR TESTING
- SEEDS" FOR PURITY AND GERMINATION TOLERANCES. 2. DELIVER SEED IN ORIGINAL, UNOPENED CONTAINERS SHOWING WEIGHT, CERTIFIED ANALYSIS, NAME, AND ADDRESS OF PRODUCER. STORE IN A DRY, ENCLOSED LOCATION.
- TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN ½ INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS, COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT: 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE:
- SOLUBLE SALT CONTENT OF 5 TO 10 DECISIEMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE G. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER
- NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW). H. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A
- TOP DRESSING OF TREES AND SHRUBS. TREE STAKING AND GUYING STAKES: 6' LONG GREEN METAL T-POSTS
- GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH
- 3. STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.
- PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.

# <u>METHODS</u>

# A. SOIL PREPARATION

- BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
- SOIL TESTING: a. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SUBMITTED TO THE LAB SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING
- THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT. SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
- c. THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
- d. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURE, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE
- THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS. FITHER INCREASE OR DECREASE. SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
- FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:

  a. TREES: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF **ROTOTILLING AFTER CROSS-RIPPING:** NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
- 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) 10 LBS. PER CU. YD. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
- IRON SULPHATE 2 LBS. PER CU. YD.
- 5. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS. a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS
- FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING
- c. THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (BASED ON A SOIL TEST, PER SPECIFICATIONS), AND THE FINISH
- GRADES TO BE ESTABLISHED. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE. IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY
- FROM THE WALKS. e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS. IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE. AS SPECIFIED ON THE GRADING PLANS AT APPROXIMATELY 18" AWAY FROM THE WALKS
- SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS. GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE
- ARCHITECT, GENERAL CONTRACTOR, AND OWNER. 6. ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

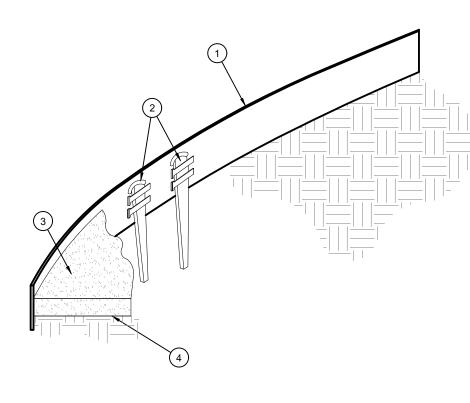
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES. 2. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE. PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES. AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE
- 3. SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY). 4. WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE ITEM BEING CONSIDERED.
- GENERAL PLANTING REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES
- AT THE MANUFACTURER'S RECOMMENDED RATE. TRENCHING NEAR EXISTING TREES: CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL
- ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
- ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
- ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS. d. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY.
- DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS. TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE
- ROOTBALL, AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES. SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE REMOVE ANY GLAZING THAT MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE. 3. FOR CONTAINER AND BOX TREES. TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT
- DEFECTS. THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE ROOTBALL OF ALL TREES JUST BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL 4. INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO
- 5. BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, USE STORED TOPSOIL FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL.
- 6. TREES SHALL NOT BE STAKED UNLESS LOCAL CONDITIONS (SUCH AS HEAVY WINDS OR SLOPES) REQUIRE STAKES TO KEEP TREES UPRIGHT. SHOULD STAKING BE REQUIRED. THE TOTAL NUMBER OF TREE STAKES (BEYOND THE MINIMUMS LISTED BELOW) WILL BE LEFT TO THE LANDSCAPE CONTRACTOR'S DISCRETION. SHOULD ANY TREES FALL OR LEAN, THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN THE TREE, OR REPLACE IT SHOULD IT BECOME DAMAGED. TREE STAKING SHALL ADHERE TO THE FOLLOWING GUIDELINES:
- TWO STAKES PER TREE THREE STAKES PER TREE TREES OVER 4" CALIPER GUY AS NEEDED

FOUR INCHES ABOVE THE SURROUNDING GRADE.

- THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS NEEDED TO STABILIZE THE TREE 7. UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE.
- COVER THE INTERIOR OF THE TREE RING WITH MULCH (TYPE AND DEPTH PER PLANS).
- SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN. LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN. LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD

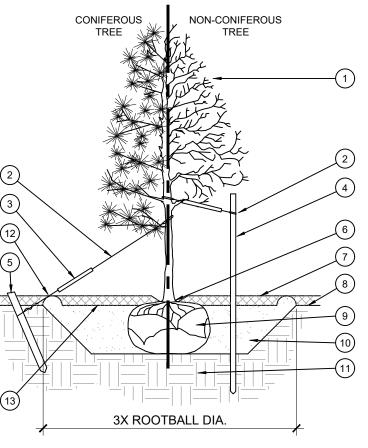
STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.

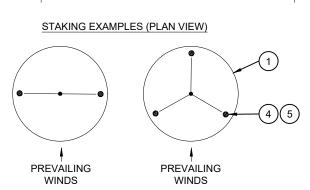
- 4. ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL 5. WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT
- LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD. 1. INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TRFF RINGS DO NOT INSTALL MULCH WITHIN 6" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES.
- EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL. CLEAN UP
- 1. DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION. LEGALLY DISPOSE ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
- INSPECTION AND ACCEPTANCE 1. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR
- SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY. 2. WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE ANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S
- SATISFACTION WITHIN 24 HOURS THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
- K. LANDSCAPE MAINTENANCE THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION
  - 2. SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL. HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
  - THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE
  - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESODDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.
- L. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SOD, AND IRRIGATION SYSTEMS FOR A PERIOD OF <u>ONE YEAR</u> FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR
- REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY. 2. AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD, THE LANDSCAPE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH
- CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.



- (1) ROLLED-TOP STEEL EDGING PER PLANS.
- (2) TAPERED STEEL STAKES.
- (3) MULCH, TYPE AND DEPTH PER PLANS
- (4) FINISH GRADE.
- 1) INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED.
- P) BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE 3) TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.







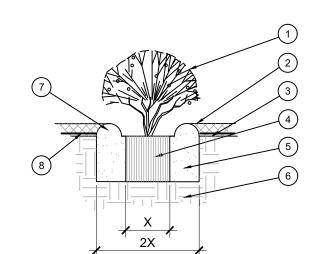
- (1) TREE CANOPY.
- (2) CINCH-TIES (24" BOX/2" CAL. TREES AND SMALLER) OR 12 GALIGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (36" BOX/2.5" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
- (3) 24" X 3/4" P.V.C. MARKERS OVER WIRES.
- (4) GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
- PRESSURE-TREATED WOOD DEADMAN, TWO PER TREE (MIN.). BURY OUTSIDE OF PLANTING PIT AND 18" MIN. INTO UNDISTURBED SOIL.
- (6) TRUNK FLARE.
- 7) MULCH, TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
- (8) FINISH GRADE.

(9) ROOT BALL.

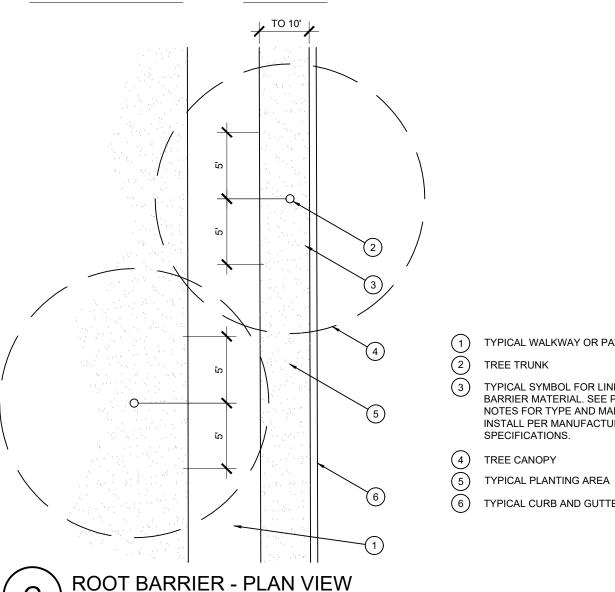
- 10) BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
- (11) UNDISTURBED NATIVE SOIL.
- (12) 4" HIGH EARTHEN WATERING BASIN. (13) FINISH GRADE.

SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE. REMOVE EXCESS SOIL APPLIED ON TOP OF THE ROOTBALL THAT COVERS THE ROOT FLARE. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL, AND THE ROOT FLARE IS 2"-4" ABOVE FINISH GRADE. 3. FOR B&B TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE

- PLACING TREE IN HOLE, CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL. REMOVE ALL NURSERY STAKES AFTER PLANTING. 5. FOR TREES 36" BOX/2.5" CAL. AND LARGER, USE THREE STAKES OR
- DEADMEN (AS APPROPRIATE), SPACED EVENLY AROUND TREE. 6. STAKING SHALL BE TIGHT ENOUGH TO PREVENT TRUNK FROM BENDING, BUT LOOSE ENOUGH TO ALLOW SOME TRUNK MOVEMENT



- ( 1 ) SHRUB, PERENNIAL, OR ORNAMENTAL GRASS MULCH TYPE AND DEPTH PER PLANS. PLACE NO. MORE THAN 1" OF MULCH WITHIN 6" OF PLANT
- CENTER 3) FINISH GRADE.
- (4) ROOT BALL.
- 5 ) BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
- (6) UNDISTURBED NATIVE SOIL
- (7) 3" HIGH EARTHEN WATERING BASIN. (8) WEED FABRIC UNDER MULCH.
- SHRUB AND PERENNIAL PLANTING

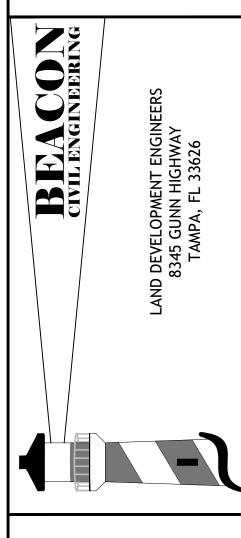


OPEN LANDSCAPE PARKWAY (1) TYPICAL WALKWAY OR PAVING TYPICAL SYMBOL FOR LINEAR ROOT BARRIER MATERIAL. SEE PLANTING NOTES FOR TYPE AND MANUFACTURER. INSTALL PER MANUFACTURER'S (6) TYPICAL CURB AND GUTTER





**PRELIMINARY** NOT FOR CONSTRUCTION



TAKE 5 OIL **CHANGE** 

MADISON HEIGHTS

434 12 MILE ROAD MADISON HEIGHTS **MICHIGAN** 

LANDSCAPE **DETAILS & SPECS** 

SHEET NUMBER:

#### Schedule A Descripti

LAND SITUATED IN THE CITY OF MADISON HEIGHTS, COUNTY OF OAKLAND, STATE OF MICHIGAN, DESCRIBED AS FOLLOWS: A SPLIT OF THE FOLLOWING DESCRIPTION:

PART OF THE SOUTHEAST 1/4 OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, CITY OF MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS: BEGINNING AT POINT DISTANT SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 642.42 FEET FROM SOUTHEAST SECTION CORNER; THENCE NORTH 01 DEGREES 45 MINUTES 23 SECONDS WEST 1466.47 FEET; THENCE SOUTH 83 DEGREES 57 MINUTES 31 SECONDS WEST 88.16 FEET: THENCE SOUTH 44 DEGREES 17 MINUTES 15 SECONDS WEST 548.27 FEET: THENCE SOUTH 61 DEGREES 02 MINUTES 30 SECONDS WEST 390.07 FEET: THENCE SOUTH 01 DEGREES 25 MINUTES 47 SECONDS EAST 908.35 FEET; THENCE NORTH 87 DEGREES 44 MINUTES 30 SECONDS EAST 834.52 FEET TO BEGINNING. EXCEPT BEGINNING AT A POINT DISTANT SOUTH 88 DEGREES 32 MINUTES 10 SECONDS WEST 1417.18 FEET AND NORTH 00 DEGREES 41 MINUTES 40 SECONDS WEST 43.00 FEET FROM SOUTHEAST SECTION CORNER: THENCE SOUTH 88 DEGREES 32 MINUTES 10 SECONDS WEST 60.00 FEET: THENCE NORTH 00 DEGREES 41 MINUTES 40 SECONDS WEST 285.00 FEET: THENCE NORTH 88 DEGREES 32 MINUTES 10 SECONDS EAST 60.00 FEET: THENCE SOUTH 00 DEGREES 41 MINUTES 40 SECONDS EAST 285.00 FEET TO THE POINT OF

TOGETHER WITH NON-EXCLUSIVE EASEMENTS AS CREATED, LIMITED AND DEFINED IN ENTRANCE EASEMENT AGREEMENT RECORDED IN LIBER 38007, PAGE 88, OAKLAND COUNTY RECORDS. ALSO, TOGETHER WITH NON-EXCLUSIVE EASEMENTS AS CREATED, LIMITED AND DEFINED IN RING ROAD EASEMENT AGREEMENT RECORDED IN LIBER 38007. PAGE 126. OAKLAND COUNTY RECORDS. EXCEPTING THEREFROM, A PARCEL OF LAND, LOCATED IN THE SOUTHEAST 1/4 OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 11; THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 1417.18 FEET (RECORDED AS SOUTH 90 DEGREES 00 MINUTES 00 SECONDS WEST) ALONG THE SOUTH LINE OF SAID SECTION 11 AND THE CENTERLINE OF 12 MILE ROAD (VARIABLE WIDTH); THENCE NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 328.00 FEET (RECORDED AS NORTH 00 DEGREES 41 MINUTES 40 SECONDS WEST) ALONG THE EASTERLY RIGHT-OF-WAY LINE OF DARTMOUTH STREET (60 FEET WIDE) FOR THE PLACE OF BEGINNING: THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 60 00 FEET (RECORDED AS SOUTH 88 DEGREES 32 MINUTES 10 SECONDS WEST) TO THE WESTERLY RIGHT-OF-WAY LINE OF SAID DARTMOUTH STREET; THENCE ALONG SAID LINE FOR THE FOLLOWING FOUR COURSES: NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 579 59 FEET (RECORDED AS NORTH 01 DEGREES 25 MINUTES 47 SECONDS WEST), NORTH 61 DEGREES 06 MINUTES 30 SECONDS EAST 390.07 FEET (RECORDED AS NORTH 61 DEGREES 02 MINUTES 30 SECONDS EAST), NORTH 44 DEGREES 10 MINUTES 20 SECONDS EAST 548.25 FEET (RECORDED AS NORTH 44 DEGREES 17 MINUTES 15 SECONDS EAST 548.27 FEET) AND NORTH 63 SECONDS 54 MINUTES 50 SECONDS EAST 86.14 FEET (RECORDED AS NORTH 83 DEGREES 57 MINUTES 31 SECONDS EAST 88.16 FEET): THENCE SOUTH 01 DEGREES 48 MINUTES 30 SECONDS EAST 55.35 FEET (RECORDED AS SOUTH 01 SECONDS 45 MINUTES 23 SECONDS EAST) TO THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF SAID DARTMOUTH STREET; THENCE ALONG SAID LINE FOR THE FOLLOWING FIVE COURSES: 205.33 FEET ALONG THE ARC OF A 575.30 FOOT RADIUS CIRCULAR CURVE TO THE LEFT, CHORD BEARING SOUTH 54 DEGREES 21 MINUTES 59 SECONDS WEST 204.24 FEET. SOUTH 44 DEGREES 10 MINUTES 20 SECONDS WEST 355.70 FEET, 59.12 FEET ALONG THE ARC OF A 200.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 52 DEGREES 38 MINUTES 25 SECONDS WEST 58.90 FEET, SOUTH 61 DEGREES 06 MINUTES 10 SECONDS WEST 211.15 FEET, 218.51 ALONG THE ARC OF A 200.00 FOOT RADIUS CIRCULAR CURVE TO THE LEFT. CHORD BEARING SOUTH 29 SECONDS 48 MINUTES 35 SECONDS WEST 207.60 FEET AND SOUTH 01 DEGREES 29 MINUTES 20 SECONDS EAST 420.70 FEET TO THE PLACE OF BEGINNING.

ALSO, EXCEPTING THEREFROM, COMMENCING AT THE SOUTHEAST CORNER OF SECTION 11, TOWN 1 NORTH, RANGE 11 EAST, CITY OF MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN: THENCE SOUTH 87 DEGREES 44 MINUTES 30 MINUTES WEST 1417.18 FEET ALONG THE SOUTH LINE OF SAID SECTION 11 AND ALONG THE CENTERLINE OF 12 MILE ROAD (VARIABLE WIDTH); THENCE NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 60.01 FEET FOR A PLACE OF BEGINNING: THENCE CONTINUING NORTH 01 DEGREES 29 MINUTES 20 SECONDS WEST 145.98 FEET ALONG THE EASTERLY RIGHT-OF-WAY OF DARTMOUTH STREET (60 FEET WIDE); THENCE 36.30 FEET ALONG A 47.00 FOOT RADIUS NON-TANGENTIAL CIRCULAR CURVE TO THE RIGHT, WITH A CHORD WHICH BEARS NORTH 66 DEGREES 44 MINUTES 17 SECONDS EAST 35.41 FEET; THENCE NORTH 88 DEGREES 05 MINUTES 21 SECONDS EAST 263.88 FEET; THENCE 31.30 FEET ALONG A 30.00 FOOT RADIUS NON-TANGENTIAL CIRCULAR CURVE TO THE RIGHT WITH A CHORD WHICH BEARS SOUTH 42 DEGREES 31 MINUTES 52 SECONDS EAST 29.90 FEET: THENCE SOUTH 02 DEGREES 15 MINUTES 30 SECONDS EAST 102.90 FEET; THENCE 33.94 FEET ALONG A 49.50 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, WITH A CHORD WHICH BEARS SOUTH 17 DEGREES 23 MINUTES 01 SECONDS WEST 33.28 FEET: THENCE SOUTH 87 DEGREES 44 MINUTES 30 SECONDS WEST 307.03 FEET ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 12 MILE ROAD TO THE PLACE OF BEGINNING.

THE LAND DESCRIBED ABOVE AND SHOWN HEREON IS THE SAME LAND AS DESCRIBED IN TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT FILE NO.: NCS-910876-05-CLE. WITH AN EFFECTIVE DATE OF JUNE XX. 2018 AT 8:00 A.M.

> )UND ELED "X"

> > FOUND

CHISELED "X"

# ALTA/NSPS Topographic Survey

- (12) 12. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED ÍN A DOCUMENT: GRANTED TO: DETROIT EDISON COMPANY AND MICHIGAN BELL TELEPHONE COMPANY RECORDING NO: LIBER 3203, PAGE 274. (AFFECTS BLANKET IN NATURE.)
- (13) 13. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED ÍN A DOCUMENT: GRANTED TO: DETROIT EDISON COMPANY RECORDING NO: LIBER 3352, PAGE 557 (UNABLE TO DETERMINE, REFERENCED DOCUMENT IS ERRONEOUS.)
- (14) 14. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO. AS GRANTED ÍN A DOCUMENT: GRANTED TO: DETROIT EDISON COMPANY RECORDING NO: LIBER 4305, PAGE 310 (AFFECTS PLOTTED AND SHOWN.)
- (15) 15. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: THE CITY OF MADISON HEIGHTS, A MUNICIPAL CORPORATION OF OAKLAND COUNTY, MICHIGAN RECORDING NO: LIBER (AFFECTS PLOTTED AND SHOWN.)
- (i) 16. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF OAKLAND, STATE OF MICHIGAN, A PUBLIC BODY CORPORATE RECORDING NO: LIBER 7959, PAGE 736 AND PAGE 9119, PAGE 480. (AFFECTS PLOTTED AND SHOWN.)
- (17)-17. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: THE CITY OF MADISON HEIGHTS, A MUNICIPALITY EXISTING UNDER THE LAWS OF THE STATE OF MICHIGAN RECORDING NO: LIBER 9593, PAGE 481. (AFFECTS PLOTTED AND SHOWN.)
- (18) 18. TERMS, COVENANTS, AND CONDITIONS OF AGREEMENT AS SET FORTH BELOW: RECORDING NO: LIBER 37967, PAGE 617. (AFFECTS, CONTAINS NO PLOTTABLE ITEMS.)
- (19) 19. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS AS SET FORTH IN ENTRANCE EASEMENT AGREEMENT RECORDED IN LIBER 38007, PAGE 88. (AFFECTS PLOTTED AND SHOWN.)
- \bigcap 20. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS AS SET FORTH IN RING ROAD EASEMENT AGREEMENT RECORDED IN LIBER 38007, PAGE 126. (AFFECTS PLOTTED AND SHOWN.)
- (2) 21. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS AS SET FORTH IN ACCESS, SIGN, WATERMAIN, SANITARY SEWER AND STORM WATER DRAINAGE EASEMENT RECORDED IN LIBER 40662, PAGE 160. (AFFECTS PLOTTED AND SHOWN.)

CROSS ACCESS EASEMENT

LIBER 40662, PG. 160

#### Elevation Benchmarks

TEMPORARY BENCHMARK #1 MAG NAIL NORTHING: 368942.77 EASTING: 13462668.12

TEMPORARY BENCHMARK #2 MAG NAIL NORTHING: 368711.58 EASTING: 13462259.2

ELEVATION: 364.25'

ELEVATION: 334.48'

#### Invert Information

#### SANITARY STRUCTURE INVERTS

RIM ELEVATION: 635.45' 8" PVC NORTH: 626.75' 10" PVC WEST: 626.75' 12" CLAY SOUTH: 626.65'

## STORM WATER STRUCTURE INVERTS

PARCEL 2511476015

814,340 SQ. FEET ±

18.695 ACRES ±

17' PUBLIC HIGHWAY EASEMEN'I LIBER 9119, PAGE 480

RIM ELEVATION: 633.90' 24" RCP EAST: 628.10' 26" RCP WEST: 628.10'

RIM ELEVATION: 633.74' 30" RCP EAST: 626.54" 24" RCP WEST:626.84 UNKNOWN RCP SOUTH: N/A

# GRATED INLET STRUCTURE INVERTS RIM ELEVATION: 633.42'

RIM ELEVATION: 632.53' 24" RCP NORTH: 626.13' 24" RCP WEST: 626.53' 18" RCP SOUTHEAST: 626.73'

15" RCP NORTH:628.24'

12" RCP WEST: 628.50'

RIM ELEVATION: 632.63' 24" RCP EAST: 626.73' 6" CPP NORTHWEST: 628.63' 15" RCP WEST: 627.25' 15" RCP SOUTH: 627.13 6" CPP SOUTHEAST: 628.43'

RIM ELEVATION: 632.61' 18" RCP EAST: 627.74' 6" CPP NORTHWEST: 629.06 15" RCP SOUTH: 628.01'

6" CPP SOUTHEAST: 628.51'

CHORD BEARING V 51°59'57" E

- COMPLETED FIELD WORK WAS MONTH DY, YEAR. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH PER GPS COORDINATE OBSERVATIONS MICHIGAN STATE PLANE, SOUTH ZONE NAD83. LATITUDE =  $42^{\circ}30'18.8209"$  $LONGITUDE = -83^{\circ}06'33.4119"$
- CONVERGENCE ANGLE = 00°51'20.47563" DISTANCES SHOWN ON PLAT ARE GRID.

WERE FOUND AT POINTS WHERE INDICATED

- COMBINED SCALE FACTOR (GRID TO GROUND) = 1.000096266266302 4. SOME FEATURES ON THIS PLAT MAY BE SHOWN OUT OF SCALE FOR CLARITY. DIMENSIONS ON THIS PLAT ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED. BEARINGS ARE REFERRED TO AN
- ANY SERVITUDE'S AND RESTRICTIONS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE SET FORTH IN THE DESCRIPTION FURNISHED TO SURVEYOR, AND THERE IS NO REPRESENTATION THAT ALL APPLICABLE SERVITUDE'S AND RESTRICTIONS ARE SHOWN HEREON.

ASSUMED MERIDIAN AND ARE USED TO DENOTE ANGLES ONLY. MONUMENTS

- NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS WERE TAKEN FROM OAKLAND COUNTY TAX CARDS AND DEEDS. NO SURVEYOR OR ANY OTHER PERSON OTHER THAN A LICENSED MICHIGAN ATTORNEY MAY PROVIDE LEGAL ADVICE CONCERNING THE STATUS OF TITLE TO THE PROPERTY DESCRIBED IN THIS SURVEY ("THE SUBJECT PROPERTY"). THE PURPOSE OF THIS SURVEY, AND THE COMMENTS RELATED TO THE SCHEDULE B-II EXCEPTIONS, IS ONLY TO SHOW THE LOCATION OF BOUNDARIES AND PHYSICAL OBJECTIONS IN RELATION THERETO. TO THE EXTENT THAT THE SURVEY INDICATES THAT THE LEGAL INSTRUMENT "AFFECTS" THE SUBJECT PROPERTY, SUCH STATEMENT IS ONLY INTENDED TO INDICATE THAT PROPERTY BOUNDARIES INCLUDED IN SUCH INSTRUMENT INCLUDE SOME OR ALL OF THE SUBJECT PROPERTY. THE SURVEYOR DOES NOT PURPORT TO DESCRIBE HOW SUCH INSTRUMENT AFFECTS THE SUBJECT PROPERTY OR THE ENFORCEABILITY OR LEGAL CONSEQUENCES OF SUCH INSTRUMENT.
- 9. ALL BEARINGS AND DISTANCES SHOWN HEREON ARE MEASURED DIMENSIONS UNLESS OTHERWISE NOTED HEREON RECORD DIMENSIONS IF DIFFERING FROM MEASURED DIMENSIONS, WILL BE FOLLOWED BY "(R#)" WHERE THE # INDICATES FROM WHICH REFERENCE DOCUMENT THE DIMENSION ORIGINATED.
- 10. CONTOUR INTERVAL = 1 FOOT TOTAL NUMBER OF STRIPED PARKING SPACES OBSERVED AT THE TIME OF THE SURVEY IS 75, WHICH INCLUDES 0 DESIGNATED ADA SPACES WITH IN THE TOPOGRAPHIC AREA.
- 12. SURVEYOR NOTES THAT THE PROPERTY ABUTS THE RIGHT-OF-WAY OF 12 MILE ROAD. ACCESS TO THE RIGHT-OF-WAY MAY BE SUBJECT TO OTHER AGREEMENTS OR PROPER GOVERNMENTAL APPROVALS.
- 13. THERE WAS NO EVIDENCE OF MONITOR WELLS, OR ANY TEST BORINGS ON THE SUBJECT PROPERTY AT THE TIME OF THE SURVEY.
- 14. AT THE TIME OF THE SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF SITE
- USE AS A CEMETERY, ISOLATED GRAVE SITE OR BURIAL GROUNDS. 15. AT THE TIME OF THE SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF SITE

USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.

- ELEVATIONS ESTABLISHED WITH GPS STATIC OBSERVATIONS UTILIZING ONLINE POSITIONING USER SERVICE (OPUS) FOR POST PROCESSING. (NAVD 1988 DATUM)
- 17. AT THE TIME OF THE SURVEY, THERE WERE NO CHANGES IN STREET RIGHT-OF-WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM CONTROLLING JURISDICTION OR OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION REPAIRS.
- 18. THERE WAS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS. 19. THE NEAREST INTERSECTING STREET IS THE INTERSECTION OF TWELVE MILE
- ROAD AND ALGER STREET. WHICH IS LOCATED AT THE SE CORNER OF THE SUBJECT PROPERTY 20. SURVEYOR DID NOT RECEIVE CURRENT DEEDS FOR ADIOINING PROPERTIES
- FROM THE TITLE INSURER. SURVEYOR OBTAINED THE DEED INFORMATION REFLECTED ON THIS SURVEY ON THEIR OWN. THE USER OF THIS SURVEY SHOULD CONSULT AN ATTORNEY OR TITLE INSURER TO VERIFY THE CURRENT DEED DESCRIPTIONS FOR ADJOINING PROPERTIES
- REFERENCE DOCUMENTS NOTED HEREON WERE OBTAINED BY THE SURVEYOR AND ANY AND ALL REPRESENTATIONS BASED THEREON SHOULD BE REVIEWED BY A LICENCED ATTORNEY OR TITLE INSURER FOR VERIFICATION.

BENCHMARK #1

- SURVEYOR DID NOT RECEIVE ANY INFORMATION FROM THE TITLE INSURER REGARDING THE CURRENT ZONING CLASSIFICATION OF THE PROPERTY OR ANY REQUIREMENTS RELATED TO THE APPLICABLE ZONING CLASSIFICATION. SURVEYOR OBTAINED THE ZONING INFORMATION REFLECTED ON THIS SURVEY ON THEIR OWN. THE USER OF THIS SURVEY SHOULD CONSULT AN ATTORNEY OR TITLE INSURER TO VERIFY THE ZONING CLASSIFICATION OF THE PROPERTY AS WELL AS THE APPLICABLE RESTRICTIONS AND REQUIREMENTS ASSOCIATED WITH SUCH ZONING CLASSIFICATION
- 23. NO BUILDINGS WERE VISIBLE AT THE TIME OF THE ALTA SURVEY.

# 24. THE NEAREST FIRE HYDRANT IS SHOWN HEREON.

BY GRAPHIC PLOTTING ONLY. THIS PROPERTY IS IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP. COMMUNITY PANEL NO. 26125C0563F, WHICH BEARS AN EFFECTIVE DATE OF 09/29/2006 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA

#### ZONE DEFINITIONS ACCORDING TO THE FEMA WEBSITE.

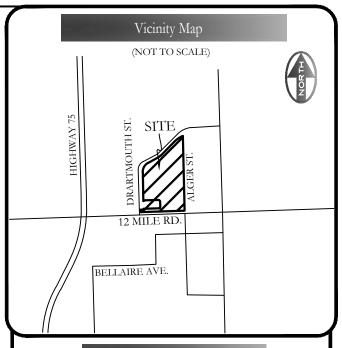
ZONE "X" - AREA OF MINIMAL FLOOD HAZARD, USUALLY DEPICTED ON FIRMS AS ABOVE THE 500-YEAR FLOOD LEVEL. ZONE X IS THE AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD AND PROTECTED BY LEVEE FROM 100-YEAR FLOOD.

#### Utility Notes

THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND APPURTENANCES ONLY. THE SURVEYOR WAS NOT PROVIDED WITH UNDERGROUND PLANS OR SURFACE GROUND MARKINGS TO DETERMINE THE LOCATION OF ANY SUBTERRANEAN USES.

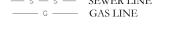
## Encroachments

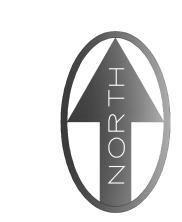
NONE APPARENT AT THE TIME OF THE SURVEY.

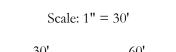


# gend of Symbols & Abbreviati

- **♦** COMPUTED POINT TEMPORARY BENCHMARK
- O SET CAPPED 5/8" REBAR BY PS 8541 FOUND MONUMENT AS NOTED
- ★ LIGHT Ø POWER POLE
- 💢 FIRE HYDRANT
- ₩ WATER VALVE
- WATER MANHOLE
- M MANHOLE
- (T) TELEPHONE PEDESTAL
- S SANITARY SEWER
- SW STORM WATER
- DRAIN GRATE • SIGN
- GAS VALVE
- GUY ANCHOR R/W RIGHT-OF-WAY
- C/L CENTERLINE TB: TOP OF BANK
- BB: BOTTOM OF BANK
- EA: EDGE OF ASPHALT
- EC: EDGE OF CONCRETE
- TA: TOP OF ASPHALT
- BOC: BACK OF CURB
- FL: FLOW LINE
- BOUNDARY LINE —— – CENTERLINE OF ROAD
- — RIGHT-OF-WAY
- × × FENCE — w — w — WATER LINE
- OHP OHP OVERHEAD POWER LINE — s — s — SEWER LINE





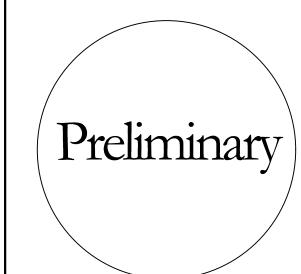


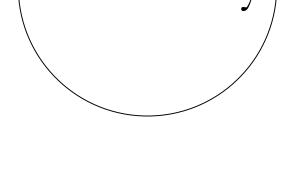
# Surveyor's Certification

TO: FIDELITY NATIONAL TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 7A, 8, 9, 11A, 13, 16. 17, & 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 01/12/2022.

RONALD R. HARRIS PROFESSIONAL SURVEYOR NO. 41917 STATE OF MICHIGAN DATE OF PLAT OR MAP: 01/14/2022





# BLEW&ASSOCIATES, P. CIVIL ENGINEERS & LAND SURVEYORS

3825 N. SHILOH DRIVE FAYETTEVILLE, ARKANSAS 72703 OFFICE: 479.443.4506 FAX: 479.582.1883 www.BLEWINC.com

22-0200 22-020 DAKLAND COUNTY, M

434 12 MILE ROAD, MADISON HEIGHTS, MICHIGAN

R THE USE AND BENEFIT OF:

BEACON CIVIL ENGINEERING, LLC

REVISION DATE

Zoning Information PROPERTY IS CURRENTLY ZONED: OBSERVED REQUIRED VACANT LAND PERMITTED USE N/A MIN. LOT AREA N/A18.695 ACRES MIN. LOT WIDTH N/A 834.74' 0% MAX. BLDG COVERAGE N/A N/AMIN. SETBACKS FRON' N/A MIN. SETBACKS SIDE N/AN/A MIN. SETBACKS REAR N/AN/AN/A MAX BUILDING HEIGH PARKING REGULAR N/A 75 PARKING HANDICAP N/APARKING TOTAL N/Adrawing hereon. The user of this survey should consult an attorney or title insurer to verify the oning classification of the property as well as the applicable restrictions and requirements associated with such zoning classification

TWELVE MILE ROAD VARIABLE WIDTH CONCRETE/ASPHALT ROA VARIABLE PUBLIC R/W PER LIBER 38007, PAGE 88 S 87°07'47" W 834.74'(M) N 87°44'30" E 834.52'(R)





NE CORNER, SE 1/4 ♦ SEC. 11, T-1-N, R-11-E

Legend of Symbols & Abbreviations

COMPUTED POINT

TEMPORARY BENCHMARK

Scale: 1" = 100'

→ TEMPORARY BENCHMARK○ SET CAPPED 5/8" REBAR BY PS 8541→ FOUND MONUMENT AS NOTED

★ LIGHT

Ø POWER POLE

▼ FIRE HYDRANT

■ WATER VALVE

MANHOLE
TELEPHONE PEDESTAL
SANITARY SEWER
STORM WATER
DRAIN GRATE

WATER MANHOLE

SIGN
GAS VALVE
GUY ANCHOR
R/W RIGHT-OF-WAY

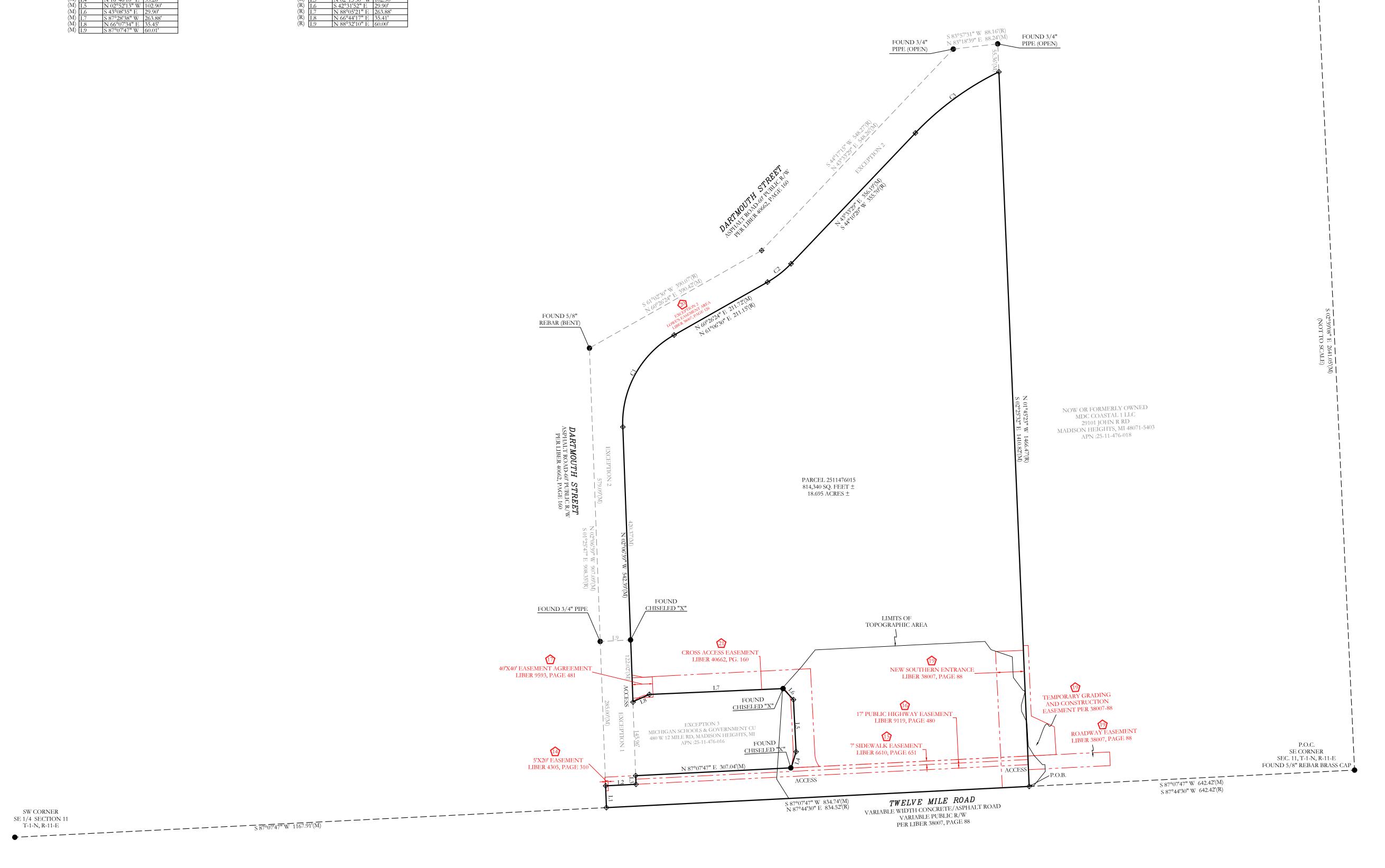
C/L CENTERLINE
TB: TOP OF BANK
BB: BOTTOM OF BANI

BB: BOTTOM OF BANK
EA: EDGE OF ASPHALT
EC: EDGE OF CONCRETE
TA: TOP OF ASPHALT

BOC: BACK OF CURB
FL: FLOW LINE
BOUNDARY LINE
CENTERLINE OF ROA

— — — CENTERLINE OF ROAD
— — — RIGHT-OF-WAY
— × — × — FENCE
— w — w — WATER LINE

— 0# — 0# — OVERHEAD POWER LINE
— S — S — SEWER LINE
— G — GAS LINE



Line & Curve Table Information

BLEW&ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS

3825 N. SHILOH DRIVE FAYETTEVILLE, ARKANSAS 72703 OFFICE: 479.443.4506 FAX: 479.582.1883 www.BLEWINC.com

DRAWN BY & DATE:

22-0200

R.H.

C.S.

COUNTY & STATE:

OAKLAND COUNTY, MI

DISTRIBUTE:

22-0200

REVIEWED BY:

SURVEYED BY:

C.S.

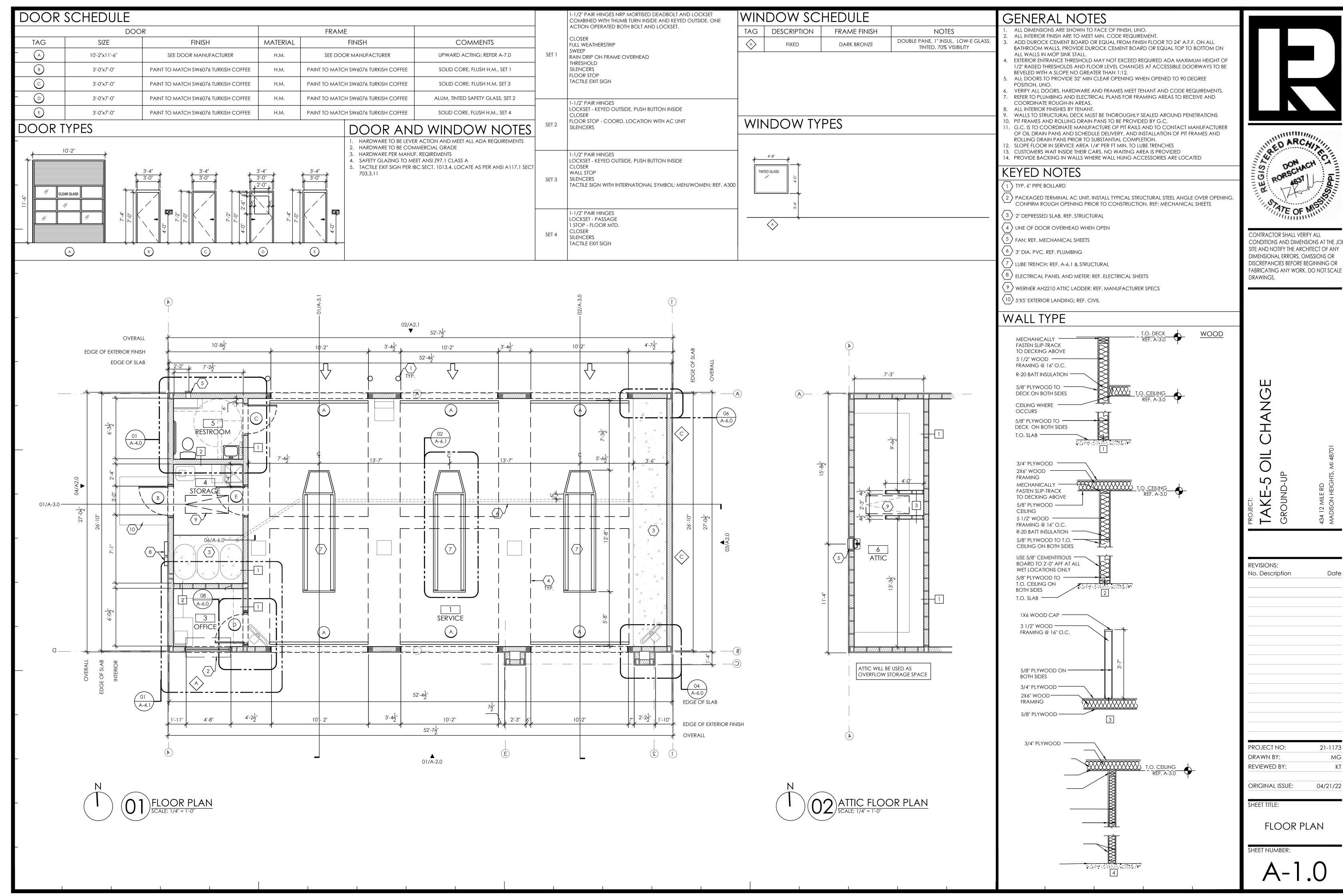
22-0200

FOR THE USE AND BENEFIT OF:

434 12 MILE ROAD, MADISON HEIGHTS, MICHIGAN

> BEACON CIVIL ENGINEERING, LLC

> > Sheet 2 of 2



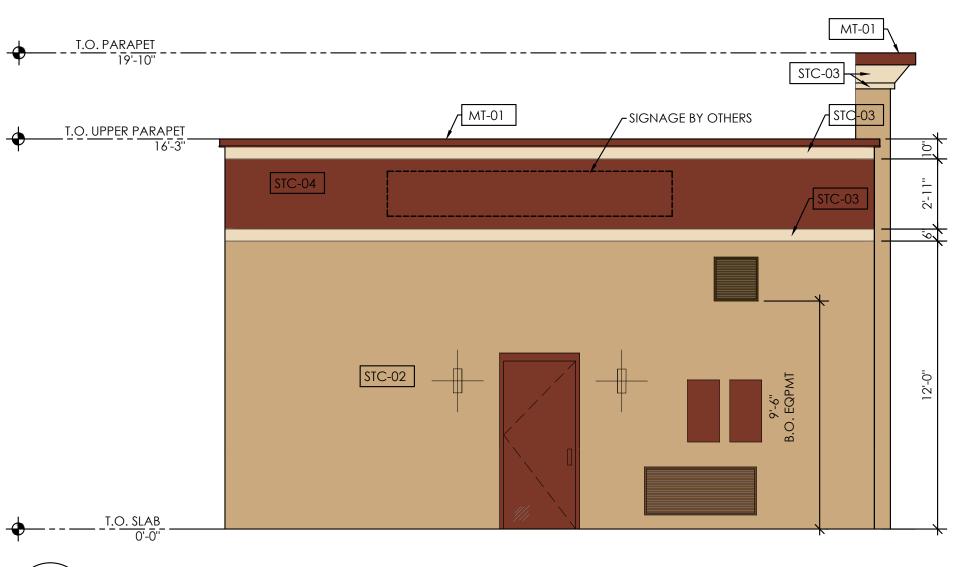


EXTERIOR FINISH SCHEDULE					
	TAG	TYPE	COLOR		
	STC-02	STUCCO	SW #7693 STONEBRIAR		
	STC-03	STUCCO	SW#7678 COTTAGE CREAM		
	STC-04	STUCCO	SW #2839 ROYCROFT COPPE RED		
	MT-01	METAL	SW #2839 ROYCROFT COPPE RED		
	GLAZING				
	PAINT DOOR PANELS TO MATCH SW# 2839				

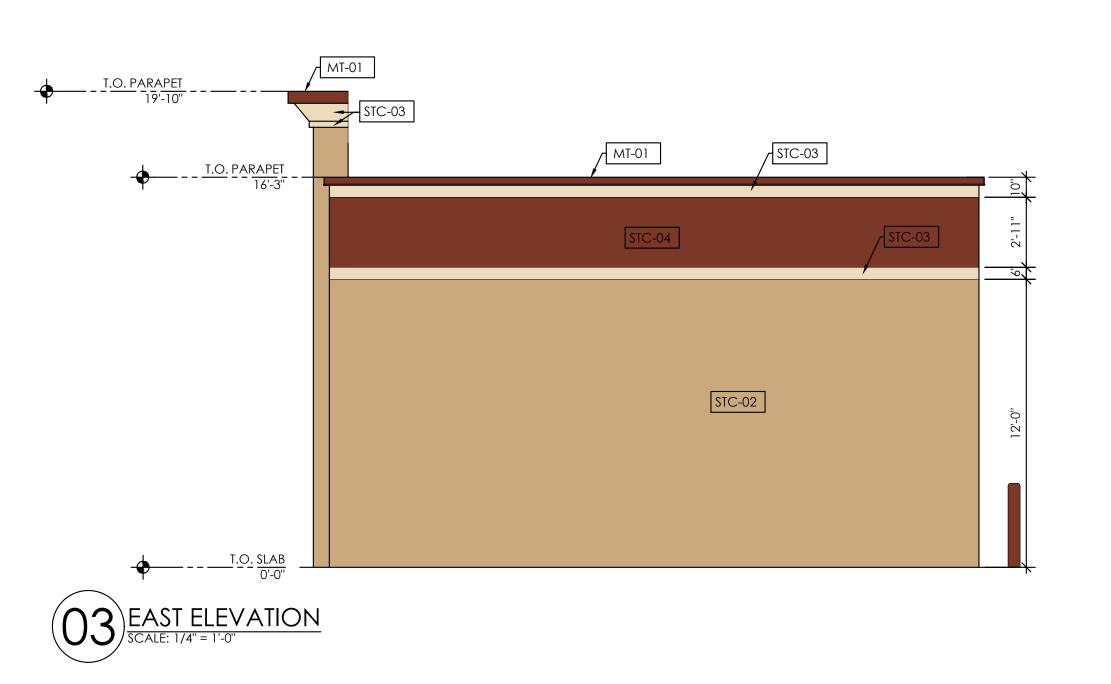
















CONTRACTOR SHALL VERIFY ALL
CONDITIONS AND DIMENSIONS AT THE JOB
SITE AND NOTIFY THE ARCHITECT OF ANY
DIMENSIONAL ERRORS, OMISSIONS OR
DISCREPANCIES BEFORE BEGINNING OR
FABRICATING ANY WORK. DO NOT SCALE
DRAWINGS.

TAKE-5 OIL CHANGE
GROUND-UP

REVISIONS: No. Description Date

PROJECT NO: 21-1173
DRAWN BY: MG
REVIEWED BY: KT

04/21/22

ORIGINAL ISSUE:

SHEET TITLE:

CONCEPT ELEVATIONS

SHEET NUMBER:

A-2.0