



PLANNING COMMISSION
TUESDAY, MAY 14, 2019
Sycamore Room - 1st Floor - 6:30 P.M.
201 West Ash Street, Mason MI

AGENDA

1. CALL TO ORDER

2. ROLL CALL

3. PUBLIC COMMENT

4. APPROVAL OF MINUTES

- A. Approve Minutes of Regular Planning Commission Meeting April 9, 2019
- B. Approve Minutes of Planning Commission Training Workshop April 9, 2019

5. UNFINISHED BUSINESS

6. NEW BUSINESS

- A. Resolution 2019-04: City Limits, has requested final site plan approval to construct a 4,828 square foot addition to expand an indoor recreation use, and to expand parking at property located at 801 N. Cedar St.
- B. Resolution 2019-05: David Meredith, has requested final site plan approval for a change of use to allow an indoor arcade and escape room on the first floor of property located at 118 W. Oak St.
- C. Resolution 2019-06: Tavis Cherry, Timeless Treasures, has requested final site plan approval for change of use of an existing 8,100 square foot building to an antique mall with a new parking reserve area.
- D. Kipp Rd Corridor – Future Land Use Discussion
- E. Sign Ordinance Update

7. LIAISON REPORT

- A. Development Update: City Manager's Report (May 3, 2019)

8. ADJOURN

**CITY OF MASON
PLANNING COMMISSION MEETING
MINUTES OF APRIL 9, 2019
DRAFT**

Waxman called the meeting to order at 6:30 p.m. in the Sycamore Room 1st floor at 201 West Ash Street, Mason MI.

Present: Barna, Droscha, Howe, Perrault, Shattuck, Waxman
Absent: Sabbadin (gave notice)
Also present: Elizabeth A. Hude, AICP, Community Development Director

PUBLIC COMMENT

Leon Clark, 416 W. Oak St., invited members to a reception Thursday, April 25th following the school committee meeting to meet with visitors from Kosovo, Mason's Sister City.

APPROVAL OF MINUTES

MOTION by Droscha second by Howe, to approve the Planning Commission meeting minutes from March 12, 2019.

Yes (6) Barna, Droscha, Howe, Perrault, Shattuck, Waxman
No (0)
Absent (1) Sabbadin

PUBLIC HEARING

None.

UNFINISHED BUSINESS

None.

NEW BUSINESS

None.

LIAISON REPORT

A. Development Update: the City Manager's Report dated 3/29/2019 was provided to members in their meeting packets.

Councilmember Droscha provided the following updates from City Council

- The Capital Improvements Program was approved by council.
- The rezoning of 118 W. Oak was approved by council.
- The Special Assessment Policy was approved.
- There is support for the City of Mason hiding Facebook comments.

ADJOURN

The meeting adjourned at approximately 6:39 p.m.

Anne Klein Barna, Secretary

**CITY OF MASON
PLANNING COMMISSION TRAINING WORKSHOP
MINUTES OF APRIL 9, 2019
DRAFT**

Waxman called the meeting to order at approximately 6:50 p.m. in the Sycamore Room 1st floor at 201 West Ash Street, Mason MI.

Present: Barna, Droscha, Howe, Perrault, Shattuck, Waxman
Absent: Sabbadin (gave notice)

Also present: Elizabeth A. Hude, AICP, Community Development Director

PUBLIC COMMENT

None.

PRESENTATION

- a. Tour and overview of Community Development Office
Members toured the Community Development Office and were provided an overview on department staff and roles.

TRAINING

- a. Contents of binder
There was an overview of the components of the Planning Commissioner binders.
- b. Communication - Social Media and the Grocery Store
There was a discussion that highlighted elements of the Open Meeting Act and Ex Parte conversations.
- c. Checklist for site plan review
There was an overview of aspects of the site plan review that are critical when completing a site plan review.
- d. Roster and Nameplates
Commissioners verified the spelling of their names for nameplates that are accepted to be ordered in the near future.

ADJOURN

The meeting adjourned at approximately 7:30 p.m.



City Manager's Report: May 3, 2019

ACTIVE PROJECTS STATUS UPDATES (PROJECTS NOT COORDINATED BY THE CITY)

Project Name	Status
318 W. Kipp - Klavon's 228 W. Kipp - Klavon's	A Temporary Certificate of Occupancy has been issued. They are open for business! Staff anticipates a Special Use/Site Plan Application for the development of the overflow parking lot in the near future.
322 S. Jefferson Commercial Bank – Downtown Mason	Two building permits are active for interior and exterior renovations to restore two entrance doors on Jefferson St.; replace door and add concrete pad at alley entrance. A third building permit is being issued for renovation of the upstairs offices.
402 S. Jefferson (former Baja Grill)	Grant Agreement has been signed. The building permit is under review.
201 W. Ash City Hall	Anticipate installation of T-Mobile equipment to begin this spring
154 W. Maple (former shoe store)	Building permit has been issued. A Right of Way Permit is under review which will include a temporary easement to use the vacant lot at the alley/Jefferson Street for staging of equipment for the project. A Letter of Intent is being issued for support of the project at a lower amount than requested. Developer is evaluating the feasibility of the project.
600 Buhl St. Ingham Animal Shelter	Building permit active for new construction.
652 Hull Rd New Goodwill	Staff anticipates a building permit application once supplemental permits from the State and County have been obtained.
400 S. Cedar St Harvey Education Center / Mason Public Schools	State building permit active for construction of new addition as part of the Phase 1 Bond Project. More information available at: http://bondprojects.masonk12.net/ .
801 N. Cedar St. (City Limits)	City Limits, has requested final site plan approval to construct a 4,828 square foot addition along with additional parking. The project is expected to be reviewed by the Planning Commission at their regular meeting on May 14.
Ash/Cedar (M-36) - MDOT	MDOT has started the signal upgrade project at the intersection of Ash and Cedar (M-36) next week. The Contractor completed installation of the signal foundations. The signals themselves and the sidewalk work will take place at a later time TBD. This 2nd phase of work will take approximately 1-2 weeks and will have the following traffic impacts: Periodic daily lane closures on M-36 for the Contractor to perform the work. The intersection will not be closed at any time and traffic will be maintained through the intersection.
Howell/Okemos Rd intersection – Ingham County Road Department	ICRD is installing a four-way stop with flashers at this intersection.
SUBDIVISIONS	<i>Subdivisions require three stages of approval before site plan approval and building permits can be issued: (1) Tentative Preliminary Plat, (2) Final Preliminary Plat, (3) Final Plat.</i>
Enclave at Rayner Ponds Subdivision (19 lots, 1 park)	The City has approved a Tentative Preliminary Plat (Stage 1) and is waiting to receive an application for Final Preliminary Plat (Stage 2).
Rayner Ponds – Phase 4 Subdivision (16 lots)	The City approved a Tentative Preliminary Plat in January of 2018 (Stage 1). Staff received an application for Final Preliminary Plat (Stage 2) in December of 2018. A public hearing was held by the Planning Commission on January 15 resulting in a recommendation for approval to City Council. City Council approved the Final Preliminary Plat on January 21, 2019. The applicant will submit a Final Plat for approval (Stage 3) next.

OPERATIONS AND COMMUNITY RELATIONS

- The Code Enforcement Officer position has been moved to Community Development from the Police Department.
- On April 11th Crp. Mentink and Off. Bradley attended a 1-day formal training in police report construction and

communication to gain additional skills and in current and best practices.

- On April 16th Off. Michele, Cert. Taser Instructor, attended a 1-day course in Michigan Taser Laws and current Policy to enhance his credential as a Taser and use-of –force instructor.
- On April 18th Off. Flores attended a 2-hour seminar to assist in recognizing and working with those with Autism who may have police contacts.
- The Police and Fire Departments responded to a fire at 622 Hall Boulevard on May 3, 2019. The City received mutual aid from Delhi Township Fire Department, Dansville Fire & Rescue, Leslie Fire Department, and Meridian Township Fire Department's RIT Team. There were no injuries, but the house is a total loss.

Staffing Updates:


- New Hires/Promotions: David Latter started as a Seasonal-Temporary Laborer May 1, 2019.
- Departures:
 - Charles Goeke, Code Enforcement Officer – Last Day 4/12/2019
 - Daniel Kennedy, Volunteer Fire Fighter – Last Day 4/18/2019
 - Bryan Keeler, Police Officer – Last Day 4/29/2019
- Open Positions: Seasonal-Temporary Laborer – All offers have been made pre-employment screening is being conducted. Full-Time Laborer position closed April 17 and applications are under review. Part-Time Custodian position closed May 1 and applications are under review.

LARGE CITY PROJECTS

FY 2018-2019			
Project	Project Name/Description	Status	Completed
STREETS, SIDEWALKS, BRIDGES (S)			
2017-S6	South St - Northbrook to City Limits	Complete	Sep
2017-S7	Avon Street - All	Complete	Sep
2017-S8	Northbrook - South to Carom Circle	Complete	Sep
2017-S9	S. Jefferson - Oak Street to Kipp Road	Cannot begin construction before June 9 per contract. Pre-Con meeting scheduled for May 8.	
2017-S10	Sidewalk Program – Downtown and Summerwood	Work downtown nearing completion; Summerwood will begin after downtown.	
2018-S1	MDOT- Temple Street Safety Grant	MDOT Grade Inspection completed. Awaiting MDOT comments and authorization to bid.	
2018-S32	Columbia - Cedar to US 127	Complete	Sep
UTILITIES: SANITARY SEWER, STORM WATER, AND WATER DISTRIBUTION (U)			
2018-U1	Utilities for Properties on Kipp Road	Complete	Sep
2017-U3.2	Waste Water Treatment Plant Upgrades	Complete	Oct
2017-U3.3	Design of the New DPW Facility	Delayed until future FY (2019-2020)	N/A
2017-U6	Abandon Wells by Airport	Delayed until future FY (2021-2022)	N/A
2017-U9	Northbrook - South to Carom Circle	Complete	Sep
2017-U10	S. Jefferson - Oak St to Kipp Road	See 2017-S9 above	
2017-U12	300,000 G Storage Tank Top Sealing	Removed, included with WWTP Upgrade Project	N/A
2017-U13	Well No. 7 Rebuild	Well work is complete. Motor drive is on order.	
2017-U15	Replace Two Fire Hydrants Behind Mason Plaza	Delayed until future FY (2019-2020)	N/A
2017-U16	Cathodic Protection for Ground Storage Tank	Delayed until future FY (2020-2021)	N/A
2017-U17	High Service Pump No. 1 Rebuild	Complete	Mar
2017-U18	Replace Chlorine Analyzer	Complete	Aug
2018-U35	BS&A Work Order Application	Award of project anticipated in May	
2018-U36	Sewer Push Camera Replacement	Complete	Nov
2018-U37	Log Jam Removal Sycamore Creek	Complete	Nov
PARKS/ CEMETERY/ FORESTRY/ NONMOTORIZED (P)			
2017-P8	Laylin Park Improvements	Staff is evaluating final work priorities for the spring.	

2018-P1	Howell Road - Hayhoe Riverwalk (Dart Trailhead)	Complete	Nov
2018-P2	Howell Road - Hayhoe Riverwalk Trail Extension	Complete	Nov
2018-P3	Planning: 5 yr Parks/Recreation Plan; Bond Park Improvements	City Council approved contract award to LAP on May 6. Staff is executing contract and anticipates project kick-off this month.	
2018-P5	City Tree Evaluation	Notice to Proceed & Contract signed; Pre-Evaluation Meeting held on April 30.	
MOTOR VEHICLE POOL (MVP)			
2017-MVP6	1/2 Ton 2x4 Pickup Truck	Complete	Sep
2017-MVP7	Mower	Complete	Jul
2017-MVP8	Police Cars	Complete	Jan
2017-MVP9	Large Items (Leaf Vacuum)	Complete	Nov
2017-MVP10	5-yard Dump/Plow Truck	Complete (Build Out with Equipment Next Year)	May
2017-MVP18	Command Vehicle	Complete	Oct
2017-MVP30	Front End Material Loader	Complete	Nov
BUILDING, PROPERTY, EQUIPMENT (B)			
2017-B1	Library- Facility Evaluation	The concept design is being revised and finalized based upon public feedback. The project will be prepared to move forward to the final design and construction phases once funding has been confirmed.	
2017-B3.1	Police: Portable Radios	Complete	Oct
2017-B4	City Hall Landscaping and Lighting	Phase 1 completed. Phase 2/3 scheduled for the spring as time and budget allows.	
2017-B6	Fire: Fire Engine 809/Tower 808	Truck is on order; completion anticipated 2020	
2018-B4	IT: BS&A Timesheet Program	Not started, connection issues with offsite facilities	
2018-B4	IT: BS&A Cemetery and HR Upgrade	Complete	Nov
2018-B6	IT: AV Room Technology Patch	Requesting Council Approval May 8, 2019	
2018-B7	Planning: Cedar/127 Corridor (Transportation and Land Use)	Moved to 2019-2021 – integrate with master plan	N/A
2018-B24	City Hall Rental Space Furniture Replacement	Old rectangle tables have been replaced with plastic ones. New chairs are currently being evaluated.	

FY 2019-2020			
Project	Project Name/Description	Status	Completed
	2019 Local Streets	Bonds and Insurances in hand; Pre-Construction Meeting set for May 8, Contract and Notice of Award to be signed at the pre-construction meeting. Anticipate May 15th start of construction.	

	<p>City of Mason Planning Commission Staff Report</p>
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TO: Planning Commission
FROM: Elizabeth A. Hude, AICP, Community Development Director
SUBJECT: 801 N. Cedar St. – City Limits
DATE: May 9, 2019

Jim Cicorelli, City Limits, is requesting Final Site Plan Approval to construct a 4,828 square foot addition to expand an indoor recreation use, and to expand parking on property located at 801 N. Cedar Street. The proposal is shown on the following plans and documents:

- Zoning Permit Application, received February 14, 2019
- Letter requesting waiver of landscaping requirements dated May 3, 2019
- Plan set dated January 10, 2019, last revised May 3, 2019
- Architectural drawings, received April 19, 2019
- Stormwater Management Report prepared by DC Engineering dated January 2019.
- Boundary Survey dated March 28, 2019
- Recorded easements:
 - 2-10-66 QCD's to Reproco Inc from Bowling Alley
 - 3-18-98 Description on Cedar Street (M-36)
 - 3-18-98 Site Plan
 - 9-17-98 Agreement between Bowling Alley & Avery Oil

The applicant paid a fee of \$200, and together with the plans and documents listed above, the application appears to satisfy the submittal requirements of Sec. 94-226(c).

CONSTRUCTION SCHEDULE

The project is expected to begin as soon as possible for completion in October 2019.

LAND USE/ZONING/MASTER PLAN

The development is proposed on a parcel zoned C-2 General Commercial District. The applicant seeks to construct a 4,828 sq. ft. addition for the purpose of expanding an Indoor Recreation – Arcade use. While the ordinance does not explicitly state Indoor Recreation or Arcades as a use allowed for in the district, it is the intent of this district to provide retail and service needs which benefit local and regional populations. Further it is a use compatible with the City's zoning ordinance, Sec. 94-142(19) Public assembly buildings, indoor theaters, and auditoriums, and therefore appropriate to the C-2 district. Staff advises that a clearer definition of indoor and outdoor recreational uses be addressed in the future revision of the master plan/zoning ordinance.

The surrounding land uses and zoning are as follows:

	Current Land Use	Zoning	Future Land Use
North	Commercial (Dandy Randy/Taco Bell)	C-2 General Commercial District	Commercial
West	US 127 - Interstate Right of Way - Michigan Department of Transportation (MDOT)		
South	Commercial	C-2 General Commercial District	Commercial
East	Commercial (vacant - old Andrews Chevrolet)	C-2 General Commercial District	Commercial

The use and redevelopment of this property is generally consistent with the Master Plan, p.3-2:

“Cedar Street Business Corridor: The Cedar Business Corridor includes most of the land along Cedar Street from the US-127 interchange to South Street. This corridor presents varying conditions as one travels its length. The Plan establishes differing policies for the northern and southern portions of the corridor.

The northern half of the corridor, generally extending from the highway interchange to North Street, is afforded excellent regional access by the presence of the US-127 interchange. This segment has evolved as a business corridor catering to the convenience needs of the highway traveler and uses that particularly benefit from proximity to the highway because of the regional market on which they rely. The Plan supports the continued role of this portion of Cedar as a highway business corridor. The Plan supports the redevelopment of properties in this area to enhance their impact on the City’s overall character.

Future commercial development and redevelopment should be characterized by predominantly highway-oriented uses and uses that are particularly dependent on regional access. However, this corridor segment should undergo improvements to heighten public safety and visual amenities. These improvements should include streetscape improvements that address, in part, landscaping and lighting, signage, limitations on the frequency and number of driveways, and the use of shared service drives. This portion of Cedar Street serves as one of the primary entrances into the City. Its visual character impacts perceptions of the community as a whole and its desirability as a place of commerce.”

COMMENTS – DEPARTMENTS AND AGENCIES

Staff circulated the application and plans to city staff and agencies with jurisdiction over the project on February 19, 2019. The following comments were received.

BUILDING INSPECTOR	<p>A fire sprinkler system will be required. The threshold for an A-2 occupancy is 100 occupants or 5,000 square feet.</p> <p><i>UPDATE: The applicant has identified an alternative that will satisfy the requirements of the State Construction Code.</i></p>
Ingham County Drain Commission (ICDC)	<p>Plans must be submitted to the Drain Commissioner’s Office for Site Plan and Drainage Review and approval and for Soil Erosion Control Permit evaluation.</p> <p>A permit must be obtained from MDOT for permission to flow an additional volume across the US-127 highway.</p> <p><i>UPDATE: The applicant has received a Soil Erosion Waiver from ICDC.</i></p>

STAFF REVIEW

Staff finds that the Site Plan appears to meet the standards for Final Site Plan Approval with waivers and conditions noted below. Comments are provided below as findings of fact related to the requirements and standards below.

§94-227. Standards for site plan review and approval. In reviewing an application for site plan review and approval the following standards shall apply:

STATUS/ NOTE	REQUIREMENT
M = Appears to meet requirement; D = Does not appear to meet requirement; I = Information Needed; R = Recommendation; W = Waiver Requested; <i>Italics = Staff comments</i>	
M	(1) The site shall be developed so that all elements shall be harmoniously and efficiently organized in relation to the size, shape, type and topography of the site and surrounding property. <i>The site appears to be harmonious and efficiently organized. The new building addition is appropriately scaled with the remainder of the building. The front parking area is delineated in a manner that provides for adequate circulation of vehicles and a clear path toward the entrance. See parking discussion regarding the existing rear lot.</i>
M	(2) The site shall be developed so as not to impede the normal and orderly development, improvement, and use of surrounding property for uses permitted in this chapter. <i>The new parking alignment on the north boundary between City Limits and Dandy Randy will correct the current encroachment by City Limits onto Dandy Randy's property.</i>
M	(3) All buildings or groups of buildings shall be arranged to permit emergency vehicle access by some practical means to all sites. <i>The building is surrounded by parking area with adequate maneuvering lanes and therefore accessible from all sides for emergency vehicle access.</i>
M	(4) Every structure or dwelling unit shall have direct access to a public street or indirect access to a public street via an approved dedicated private street. <i>The site is located on a public street known as Cedar Street/M-36. M-36 is under the jurisdiction of the Michigan Department of Transportation.</i>
M	(5) Appropriate measures shall be taken to ensure that the addition or removal of surface waters will not adversely affect neighboring properties, that controls are in place to minimize sedimentation and erosion, and that topographic alterations are minimized to accommodate storm water management.
NOTE: See (6) below.	
M	(6) Provisions shall be made for the construction of storm sewer facilities including grading, gutters, piping, on-site storage, and treatment of turf as required to handle stormwater and prevent erosion. <i>There is a drainage easement granted to 805 N. Cedar (Dandy Randy) for surface water over 801 N. Cedar (City Limits) along the northeastern portion of the property. No change to the easements is proposed. The development will not adversely impact the easement.</i> <i>The applicant has received a waiver for a soil erosion permit through the Ingham County Drain Commissioner's Office.</i> <i>All storm sewer contained within the site shall remain private. A drain facilities maintenance agreement is required prior to the issuance of an occupancy permit. A copy for signature will be given to the applicant if the site plan is approved.</i>

M	(7) Secondary containment for above ground areas where hazardous substances are stored or used shall be provided as required by the city fire chief.
<i>No hazardous substances will be stored or used on site.</i>	
M	(8) Exterior lighting shall be designed and located so that the source of illumination is directed away from adjacent properties, the intensity of lighting is the minimum necessary, and the direction of lighting is downward as much as is possible and appropriate for the project.
<i>No change proposed to existing lighting in the existing rear lot. No lighting is proposed in the front parking area.</i>	
M	(9) All loading and unloading areas, outside storage areas, and refuse receptacles shall be screened from casual view from the public rights-of-way and adjoining land uses.
<i>Non-profit donation receptacle currently occupying parking space will be removed.</i>	
<i>The dumpster is screened from casual view from the right of way in part by the building. A proposed gate will screen it from the adjacent property to the north.</i>	
<i>The plan appears to meet the requirement for a single designated loading area measuring 12x25 feet. The loading area is located on the west side of the building adjacent to the dumpster. Deliveries are received at this location in the mornings when the business is closed to the public.</i>	
See a-c below	(10) Site plans shall meet the driveway, traffic safety, and parking standards of the city in such manner as necessary to address the following:
M	a. Safe and efficient vehicular and non-vehicular circulation, including parking areas, non-motorized linkages to abutting parcels, uses, sidewalks, and trails.
<i>There is an existing sidewalk in the MDOT right of way. The proposed plan appears to meet the requirements for safe and efficient vehicular access and Sec. 94-176 Supplemental Access Regulations. See also comments in (12) below, Sec. 94 Art. X – Parking and Loading Areas.</i>	
M	b. Shared driveways and service drives.
<i>The site has two access points – a curb cut along M-36 on the property and through Dandy Randy's property to the north. City Limits is the beneficiary of a 25-foot easement across Dandy Randy property to the north to allow for access onto City Limits property from M-36. Per Sec. 94-292(j)5, Adequate ingress and egress to the parking area by means of clearly limited and defined drives shall be provided. Except for parking space provided for single-family and two-family residential lots, drives for ingress and egress to the parking area shall be not less than 20-feet wide.</i>	
M	c. Adequate and properly located utilities.
<i>The site is currently served by water and sanitary sewer. No new water or sanitary sewer services are proposed for this project.</i>	
M	(11) Provisions shall be made for proposed common areas and public features to be reasonably maintained.
<i>The 'Welcome to Mason' off-premise sign, also a public feature, placed by Kiwanis is located on City Limits property. City Limits has agreed to relocate the sign further south on their property.</i>	
See below	(12) The site plan submittal shall demonstrate compliance with all applicable requirements of this chapter, chapters 58 and 74, the building code, and county, state, and federal law.
M	<i>Chapter 94 – Zoning and Chapter 100 – Dimensional Requirements</i>
<i>The plan appears to meet the building height, setbacks and lot coverage site development standards listed in Section 94-121(c) and Tables 100-1 and 100-2 as noted on the plan sheets.</i>	
M	<i>Sec. 94-172(3) Vision clearance across corner lot.</i>
<i>The proposed plan appears to meet the requirements for vision clearance where the drive intersects with M-36. There appear to be no obstructions caused by proposed landscaping and signage.</i>	

D/W	Sec. 94 – Art. X Off-street Parking and Circulation	
<i>The proposed plan appears to meet the requirements for the number and size of parking spaces. Per Sec. 94-292(j)(3) the applicant is requesting that the Planning Commission allow 18.6% (42 of 233 spaces) measure 180 s.f. (10'x18'). Staff supports the request and adds the observation that there are different peak utilization hours/seasons related to volleyball and bowling.</i>		
<i>Sec. 94-292(j)(1) prohibits parking in a front yard in a C-2 district. The front yard is defined as the area between the front property line and the building line (Figure 100-101) except upon a finding by the planning commission that such parking is a critical component of the operation of the particular use and that adequate provisions are included for the screening and landscaping of such parking area. The existing building is pre-existing and the public entrances are oriented toward the street. The proposed addition will bring the building closer to the street and will displace existing parking near the building. Staff supports a finding that parking is a critical component to the operation of the bowling alley, restaurant and arcade and should be allowed to expand in the front yard subject to the landscaping requirements. SEE LANDSCAPING DISCUSSION.</i>		
D/W	Sec. 94-241 Landscape, screening and buffer requirements	
<i>It appears that per Sec. 94-241(e)(6) the Planning Commission has the ability to waive requirements in Sec. 94-241. The applicant has submitted a request for waivers from the landscaping requirements. Therefore, the Planning Commission may choose to waive the requirements as requested so long as the intent to provide landscaping within parking areas, and to enhance aesthetic and ecological qualities, character, privacy, and land value is met. The Planning Commission has the option to accept the proposed plan and waive the requirements for the landscaping pursuant to Section 94-241 (e)(6), or require the plan to be revised with the required vegetation. Further, Sec. 94-241(e)(3) requires the Planning Commission make findings related to the parcel dimensions and/or topography for waivers from buffer requirements as follows:</i>		
<i>(3) If parcel dimensions and/or topography are such that a parcel cannot reasonably comply with the buffer zone standards of section 94-241(f), then the designated site plan approval body shall determine the character of the buffer based on the following criteria:</i>		
<i>a. Traffic impact.</i>		
<i>b. Increased building and parking lot coverage.</i>		
<i>c. Increased outdoor sales, display, or manufacturing area.</i>		
<i>d. Physical characteristics of the site and surrounding area including topography, vegetation, and other natural features.</i>		
<i>e. Visual, noise, and air pollution.</i>		
<i>f. Health, safety, and welfare.</i>		
<i>g. Additional dwelling units and resulting density in a residential development.</i>		
<i>h. The location and dimension of the existing easements on the site.</i>		
<i>i. Any other criteria pertinent to the proposed use or character of the site.</i>		
<i>A letter from the applicant is included requesting waivers from the following missing requirements:</i>		
<i>Sec. 94-241(b)(2)c – Minimum scale of 1" = 20'; the actual scale is 1" = 40'</i>		
<i>Sec. 94-241(b)(2)e – Plan is not sealed by a registered landscape architect</i>		
<i>Sec. 94-241(e)(1) – The plan does not provide the required buffer landscaping. See discussion below.</i>		
<i>Sec. 94-241(i) – The plan does not provide the required amount of off-street landscaping.</i>		
<i>Table 100-4 sets forth the required landscape buffers for the C-2 Zoning District.</i>		
	Zoning	Landscape Buffer Required
North (front)	C-2 (Dandy Randy)	A

Northeast (front)	M-2 and C-2 separated by Cedar Street (M-36) and	A (see Sec. 94-241(e)(4))	
South (rear)	C-2	A	
Southeast (side)	C-2 separated by a private drive (Jacobic Drive)	A	
West (side)	MH separated by US 127	B (see Sec. 94-241(e)(4))	

No change is proposed to the north front buffer between the volleyball courts and the Taco Bell drive-thru.

The northeast front property line requires Buffer Zone A and is adjacent to Cedar Street (M-36). The Applicant has proposed five trees where eleven are required. There are three existing trees outside of the property line in the MDOT right of way.

The southeast side property line requires Buffer Zone A. The Applicant has proposed five trees where thirteen are required. There is one existing tree that will be preserved.

The westerly side of the property is adjacent to the MDOT right of way is screened with existing vegetation. No change is proposed to the south rear buffer which abuts undeveloped property. It is staff's opinion that the addition of vegetation along the south and westerly property line in strict accordance with the requirements of Buffer Zone B is excessive.

The existing parking area in the front yard will be improved by adding two trees within two landscape islands measuring approximately 350 sq. ft. per island for a total of 700 sq. ft. The islands will improve the aesthetics of the property and provide better visual cues for traffic circulation.

The applicant has not proposed any landscaping changes within the existing parking areas. A waiver has been requested from the landscaping requirements.

M	Chapter 58 - Signs
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The site plan shows the existing free-standing sign on the property which will remain where it is. No new or expanded monument sign is proposed. The existing wall sign will be relocated once the addition is complete.

Any new signage will require a separate building permit subject to the requirements of Chapter 58 of the Zoning Ordinance, including Division 2 of said chapter.

There is an off-premise sign belonging to the Kiwanis Club that reads 'Welcome to Mason.' This will be relocated further south but will remain on the property.

Chapter 74 – Subdivisions – Not applicable

Building Code – Staff has arranged for a preliminary review of the architectural plans with the Building Inspector. A formal building permit review will take place if the site plan is approved.

County, State and Federal Law – See Agency Comments. The applicant is responsible for seeking and complying with additional permit requirements.

ACTION

§94-226. Final site plan review and approval.

The planning commission shall have the authority to approve, approve with conditions, or deny an application for final site plan review and approval. *The Planning Commission may also choose to amend the proposed resolution, or continue the review to a future time and date certain to allow for plans to be revised and/or for the applicant to provide additional information.*

§94-229. Extension of site plan approval.

Approvals of a final site plan are valid for a period of 12 months. Only one extension of a final site plan may be granted for an additional 12 months at the sole discretion of the approving authority. A final site plan is deemed to have expired if a building permit has not been obtained for the development within 12 months of approval of the final site plan. A request to extend preliminary or final site plan validity shall be submitted prior to the expiration of the preliminary or final site plan.

§94-230. Conformance to approved site plan.

A development project shall conform to the approved final site plan. Failure to conform to the approved final site plan shall constitute a violation of this chapter.

However, amendments to an approved site plan can be made subject to the provisions of §94-228 Amendments to an approved site plan.

§94-231. Review standards for planning commission decision.

(a) A decision rejecting, approving, or conditionally approving a site plan shall be based upon requirements and standards contained in the zoning ordinance, other statutorily authorized and properly adopted local unit of government planning documents, other applicable ordinances, and state and federal statutes.

(b) A site plan shall be approved if it contains the information required by the zoning ordinance and is in compliance with the conditions imposed under the zoning ordinance, other statutorily authorized and properly adopted local unit of government planning documents, other applicable ordinances, and state and federal statutes.

The applicant has submitted a Final Site Plan that, with the conditions listed, appears to contain the information required by the zoning ordinance, and will meet the standards for Final Site Plan approval.

Therefore, the following motion is offered for consideration:

MOTION

Motion to approve Resolution 2019-04.

Attachments:

1. Resolution 2019-04
2. Application
3. Letter from the applicant dated May 3, 2019 requesting waivers from landscaping
4. Plan set dated January 10, 2019, last revised May 3, 2019
5. Architectural drawings
6. Stormwater Management Report
7. Recorded easements
8. Ingham County Drain Commissioner letter dated March 1, 2019

Vacant ()

CLERK'S CERTIFICATION: I hereby certify that the foregoing is a true and accurate copy of a resolution adopted by the Planning Commission at its meeting held Tuesday, May 14, 2019, the original of which is part of the City of Mason Planning Commission minutes.

Sarah J. Jarvis, City Clerk
City of Mason
Ingham County, Michigan

Introduced:
Seconded:

**CITY OF MASON
PLANNING COMMISSION
RESOLUTION No. 2019-04**

**A RESOLUTION APPROVING A FINAL SITE PLAN TO CONSTRUCT A 4,828 SQUARE FOOT ADDITION TO
EXPAND AN INDOOR RECREATION USE, AND TO EXPAND PARKING ON PROPERTY LOCATED AT
801 N. CEDAR STREET**

May 14, 2019

WHEREAS, a request has been received from Jim Cicorelli, City Limits, for Final Site Plan Approval to construct a 4,828 square foot addition to expand an indoor recreation use, and to expand parking on property located at 801 N. Cedar Street; and

WHEREAS, the proposal was shown on plans dated January 10, 2019 and last revised on May 3, 2019; and

WHEREAS, the parcel is zoned C-2 (General Commercial District); and

WHEREAS, Section 94-222 states that any use within the C-2 zoning district requires site plan review; and

WHEREAS, the Planning Commission accepts the staff report dated May 9, 2019 as findings of fact that, with the waivers listed herein, the plans will comply with the Site Plan Approval Standards listed in Section 94-227 of the Mason Code; and

WHEREAS the Planning Commission further makes the following findings of fact:

- The Planning Commission finds parking in a front yard to be a critical component to the operations of the pre-existing structure and approves expansion of parking in the front yard; and
- The Planning Commission finds that the proposed parking meets the minimum requirement for spaces, the minimum requirement is greater than 40 spaces, making the site eligible for a reduction of the parking space size to 180 s.f. or 20%; and
- The Planning Commission finds that due to the unique parcel dimensions on the north and front of the property adjacent to the MDOT right of way and 805 North Cedar, as well as the topography to the west and south along the MDOT right of way, a waiver from the buffer requirements can be granted which considers existing vegetation, visibility for traffic, the existing easements between 801 and 805 N. Cedar and the increase in both the building and parking lot coverage.

NOW THEREFORE BE IT RESOLVED, that the City of Mason Planning Commission does hereby approve a Final Site Plan to construct a 4,828 square foot addition to expand an indoor recreation use, and to expand parking on property located at 801 N. Cedar Street with the following waivers:

- A waiver is granted to allow 42 of 233 spaces (18.6%) to measure 180 s.f. (10'x18')
- A waiver of the landscaping requirements is granted and landscaping is approved as shown on the plan

Yes ()
No ()

Absent ()

Vacant ()

CLERK'S CERTIFICATION: I hereby certify that the foregoing is a true and accurate copy of a resolution adopted by the Planning Commission at its meeting held Tuesday, May 14, 2019, the original of which is part of the City of Mason Planning Commission minutes.

Sarah J. Jarvis, City Clerk
City of Mason
Ingham County, Michigan



PERMIT APPLICATION

ZONING

Applicant- Please check one of the following:

- | | |
|---|------------------------------|
| X | Preliminary Site Plan Review |
| | Final Site Plan Review |
| | Special Use Permit* |
| | Administrative Review |

* includes Preliminary Site Plan Review

DEPARTMENT USE ONLY
RECEIVED

Application Received: **FEB 14 2019**

Tax ID: _____

Fee: _____

Receipt #: _____

CITY OF MASON
PLANNING DEPT.

Applicant Information:

Name: Jim Cicorelli

Organization: City Limits

Address: see below

Telephone Number: 517 712-0659

Facsimile Number: _____

Interest in Property (owner, tenant, option, etc.): Owner

Note: If applicant is anyone other than owner, request must be accompanied by a signed letter of authorization from the owner.

Property Information:

Owner: LEISURE TYME, LLC

Telephone Number: _____

Property Address: 801 N. CEDAR STREET MASON, MI 48854

Legal Description: If in a subdivision: Subdivision Name: _____

Lot Number: _____

If Metes and Bounds (can be provided on separate sheet): _____

BEG ON EW 1/4 LN SEC 5 83.6 FT E OF W 1/4 COR SEC. E 491.1 FT, N 36-32-18 E 367.75 FT SLY TO CEDAR ST. N 53-27-42 W 320.98 FT, S 36-32-18 W 150 FT, N 53-27-42 W 200 FT, N 36-32-18 E 150 FT, S 68-47-58 W 234.9 FT, S 13-24-58 W 285.85 FT,

S 02-54-58 W 248.55 FT TO POB ON NW 1/4 SEC 5 T2N R1W CITY OF MASON 6.94 ACRES

APPLICANT CERTIFICATION

By execution of this application, the person signing represents that the information provided and the accompanying documentation is, to the best of his/her knowledge, true and accurate. In addition, the person signing represents that he or she is authorized and does hereby grant a right of entry to City officials for the purpose of inspecting the premises and uses thereon to verify compliance with the terms and conditions of any Special Use Permit and/or Site Plan approval issued as a result of this application.

Signature: [Signature]

Date: 2-12-19

Requested Description:

Written Description: Please use this section to describe the use or uses proposed. Attach additional pages, if necessary.

A 4,828 SF BUILDING ADDITION WITH ADDITIONAL PARKING AND OTHER ASSOCIATED AMENITIES TO EXPAND EXISTING BUSINESS.

Available Services

Public Water ☒ Yes ☐ No

Paved Road (Asphalt or Concrete) ☒ Yes ☐ No

Public Sanitary Sewer ☒ Yes ☐ No

Public Storm Sewer ☒ Yes ☐ No

Estimate the Following

Traffic Generated 25

Total Employees 80

Population Increase 50

Employees in Peak Shift 35

House of Operation 11 AM to 1 AM ~~PM~~

Total Bldg. Area Proposed 4,828 SF

Mon Day through Sun day

Parking Spaces Provided 245 EX AND PR

Project Phasing

This project will be completed in: ☒ One Phase ☐ Multiple Phases – Total No. of Phases: _____

Note: The phases of construction for multi-phase projects must be shown on the site plan

Application Materials

The following are checklists of items that generally must be submitted with applications for Preliminary Site Plan Review, Final Site Plan Review, and Special Use Permits. Applicants should review Articles VI and VII of Chapter 94 of the Mason Code for a complete listing of application requirements. All site plan drawings must comply with the requirements of Section 94-226(d) of the Zoning Ordinance. Incomplete applications will not be processed.

- ☒ Completed application form
- ☒ 2 copies of full scale site plan drawings
- ☒ Plans submitted on CD or PDF (email is acceptable)
- ☒ Legal description
- ☒ Proof of ownership/owner authorization
- ☒ Construction schedule for proposed project
- ☒ Construction calculations for utilities
- ☒ Fee (see below)
- ☒ Any other information deemed necessary

*Construction start: April 2019
finish: October 2019*

Application Fee

All requests must be accompanied by a fee, as established by the City Council. The fee schedule for Preliminary Site Plan Reviews, Final Site Plan Reviews, and Special Use Permits is as follows (As of October 16, 2006):

Administrative Reviews	\$70.00
Preliminary Site Plan Reviews	\$200.00
Final Site Plan Review	\$100.00
Special Use Permits (includes preliminary site plan review)	\$275.00

201 West Ash Street; Mason, MI 48854-0370

Office: 517.676.9155; Website: www.mason.mi.us

Engineering Review

\$220.00*

*Two—hour minimum fee for projects increasing demand on public utilities. Actual fees incurred are billed to applicant upon completion of review.

Application Deadlines**Preliminary Site Plan/Special Use Permit Review**

Applications for Preliminary Site Plan Review may be submitted at any time. Complete applications must be received a minimum four (4) weeks prior to a Planning Commission meeting to be placed on the agenda. Upon receipt of a complete application, a public hearing will be scheduled for the next regularly scheduled meeting (for Special Use Permits only). The Planning Commission has the final authority to approve, approve with conditions or deny an application for Preliminary Site Plan/Special Use Permit Review. The Planning Department staff will issue a letter to the applicant advising of any changes or revisions that may be necessary prior to making application for Final Site Plan Review.

Final Site Plan Review

Complete applications must be received a minimum of four (4) weeks prior to a Planning Commission meeting to be placed on an agenda. The Planning Commission has the final authority to approve, approve with conditions or deny an application for Final Site Plan Review. Planning Commission meetings are held on the second Tuesday after the first Monday of every month, unless the Tuesday is a Township recognized holiday, in which case the meeting is held on the following day (Wednesday).

Staff Report

The Planning Department Staff will prepare a report to the Planning Commission regarding an application for Preliminary Site Plan Review, Final Site Plan Review or Special Use Permit. The report will explain the request and review whether it complies with the zoning standards of the Mason Code. Staff will present the findings of that report during the Planning Commission meeting. An applicant who wishes to obtain one (1) copy of that report, at no cost, prior to the meeting must provide a written request to the Planning Department. The report is generally complete on the Friday before the meeting and can be mailed to the applicant or picked up by the applicant in the Planning Department.

Resources: More questions? Please contact our Customer Service Desk at 517.676.9155.

Revised 7.2.2018 (Community Development)

May 3, 2019

City of Mason
Planning Commission
201 West Ash Street
Mason, MI 48854

RE: Leisure Tyme Proposed Site Improvements

To whom it concerns:

Leisure Tyme is proposing a building addition and parking lot expansion to our existing development at 801 N Cedar Street. Per ordinance, we are required to bring the landscaping of the property up to current code. We are formally requesting the Planning Commission waive some of the landscaping requirements.

The Ordinance requires that the landscape plan has a maximum scale of 1"=20' and be sealed by a licensed landscape architect. The submitted landscape plan is at a 1"=40' scale. We feel that this scale adequately presents the proposed landscaping plan, and that a larger scale would not provide additional information or clarification. We also feel that the landscape plan is simplistic in nature and does not require the expertise of a licensed landscape architect. We request the Planning Commission waive these two requirements.

The proposed improvements consist of the construction of a 4,828sf addition to the front of the building. This addition will remove existing parking lot, including parking spaces. To mitigate this loss in parking, a new parking area is proposed at the northeast corner of the parcel. Even with the new parking area, there will be a net loss of 14 parking spaces from the site.

Currently, there is no landscaping on the property. We have worked with the City Planner to develop a landscaping plan for the front of the site. We believe this landscape benefits the property, and the City, by creating an aesthetically pleasing entry into the City of Mason for residents and visitors.

The proposed development includes the removal of approximately 1,300 sf of pavement along the north edge of the existing parking lot to facility the creating of landscape area. Five trees (in addition to the existing three trees) are proposed along the Cedar Street frontage. Ordinance requires eleven trees along this property line. Therefore, we are requesting a waiver for three trees. We have proposed five trees (in addition to the one existing tree) along our eastern boundary. Ordinance requires thirteen trees. Therefore, we are requesting a waiver for seven trees. We are proposing no additional plantings along the south or west property lines. Ordinance requires forty-three trees.

In addition to the above mentioned tree plantings, we are proposing to plan twenty shrubs and one tree along the front of the new addition and existing building to soften the building façade. We are also proposing the construction of two landscape islands in the center of the front parking area. Each planter will have a canopy tree planting.

It is our understanding that the Planning Commission may waive landscaping requirements, if they choose, when considering the following:

a. Traffic Impact

There is no anticipated traffic impact from the proposed development. The front two landscaping islands closest to Cedar Street at the main drive entry have been purposefully planned without tree plantings. In discussion with the City Planner, it was agreed that trees in this location could create a un-safe visual barrier to vehicle leaving and entering the site from Cedar Street.

b. Increase in Building and Parking Lot Coverage

The proposed building addition will remove approximately 5,000 sf of parking lot. The revised parking lot layout will remove approximately 1,300 sf of parking lot along the Cedar Street corridor and add approximately 4,700 sf of new parking lot in the front northeast corner of the property. This results in a net increase of building and parking lot coverage of the site by 1.6%. The proposed landscaping plan enhances the front of the parcel where this infrastructure improvements are being made.

c. Increase in outdoor sales, displays, or manufacturing area

There is no proposed increase in outdoor sales, displays or manufacturing

d. Physical characteristics of the site and surrounding area including topography, vegetation, and other natural features

The north property line abuts to the adjacent commercial business (Taco Bell and BP gas station). We feel that additional buffering with our neighbor will not add to the aesthetics of the site. This property line is not visible from the public right of way as it is behind the neighboring buildings.

The west and northwest property line abuts MDOT US 127 off-ramp right-of-way. The area within MDOT right-of-way is 50-150 feet in width and is currently naturally vegetated. The western portion of our site is turf lawn. We feel that area is sufficiently landscaped to provide aesthetically appealing visual view to travelers entering the City of Mason via the off-ramp

The south property line abuts a vacant parcel which is naturally vegetated. We feel that additional buffering along the south property line will not increase the quality of either parcel.

The southeast property line abuts a long drive which has the feel of a roadway corridor. In-lieu of a Type A buffer, we have proposed tree plantings consistent with a road frontage buffer.

The northeast property line (Cedar Street Frontage) has been landscaped with canopy trees. This planting scheme is consistent with landscape frontages of other properties along Cedar Street which also have only street trees or no plantings.

e. Visual, Noise, Air Pollution

The proposed development will not result in an increase in Visual, Noise or Air Pollution.

f. Health, Safety, Welfare

To require a full screening along the non- road frontage lines, would potentially create a unsafe condition for patrons and the community as activities on site would not be seen from outside the property.

g. Additional dwelling units and resulting density in a residential development

The proposed development is not residential in nature. It also does not abut any residential developments.

h. Location and dimension of existing easement on the site

There are no public easements located on the site.

i. Any other criteria pertinent to the proposed use or character of the site.

City Ordinance requires a Type A buffer along the non-road frontage property lines. The Type A Buffer requires: "The buffer zone shall contain a minimum six-foot high screen comprised of plant material, deciduous or evergreen trees, erns, screen walls or fence, or any combination of these elements". We feel that to completely screen this business, which is a natural attraction for the community, from view is not in the best interest of the community and would be a detriment to attracting customers to the facility. Furthermore, to fully screen the property from view would create a safety hazard in the community as no one would be able to see what is happening on the site.

The Leisure Tyme business has been in operation since 1961. During that time, the site has remained fairly non-landscaped except for lawn grass in the non-paved portions of the site. The proposed landscaping will significantly improve the aesthetics of the Cedar Street and will be a benefit to the community by providing an aesthetically pleasing entry into the City of Mason.

We hope the above narrative assists you in your decision in regards to this matter. We look forward to working with the City to our mutual success of the City of Mason.

Sincerely,

Jim Cicorelli

CITY OF MASON
P.O. BOX 370
201 W. ASH ST.
MASON MI 48854-370
Phone : (517) 676-9155
WWW.MASON.MI.US

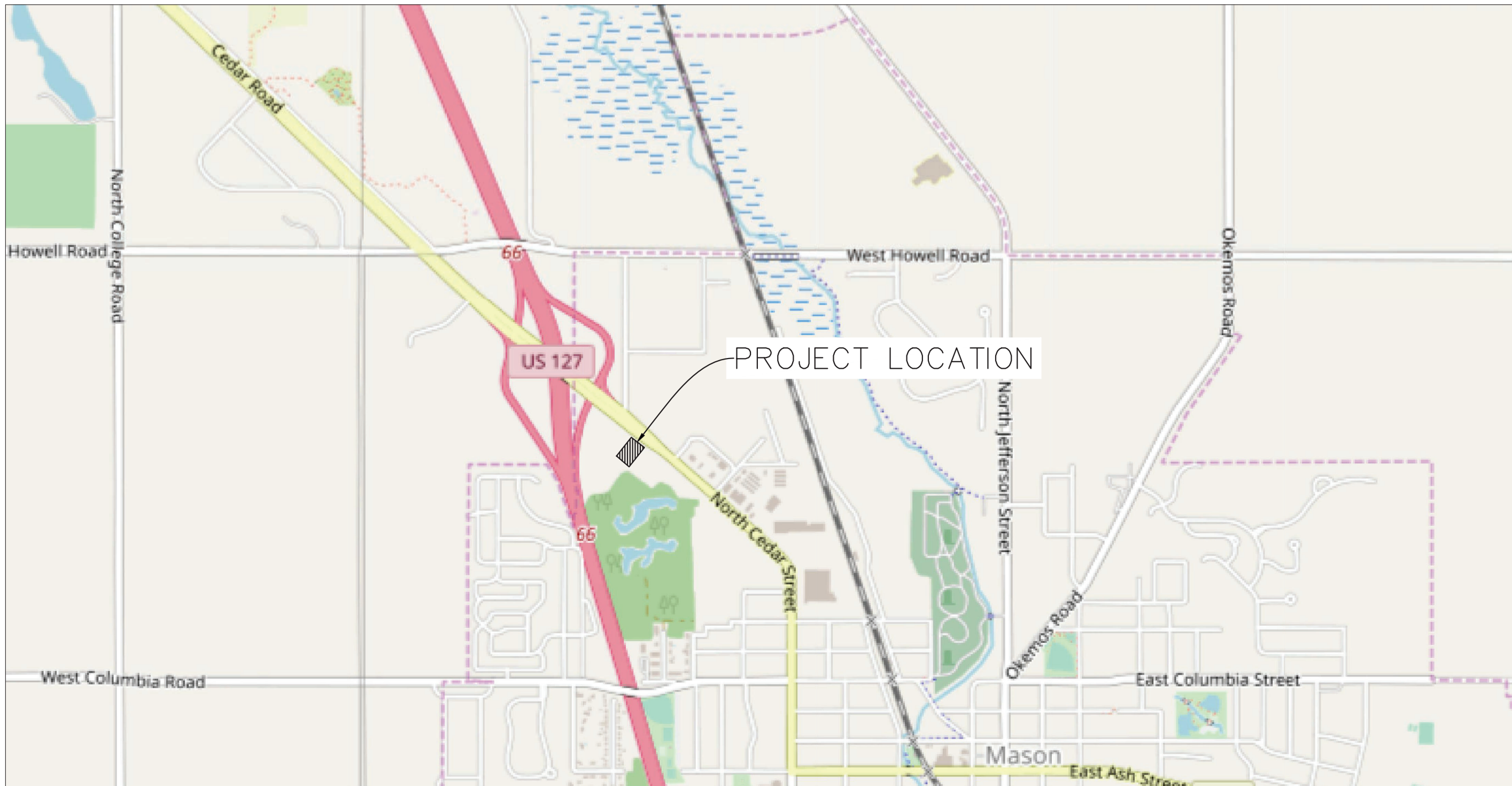
Received From:
WESTSIDE BUILDING COMPANY
916 LAURELWOOD DR
LANSING MI 48917

Date: 02/14/2019 Time: 3:06:26 PM
Receipt: 100243366
Cashier: KM

SITE PLAN REVIEW
801 N CEDAR ST

ITEM REFERENCE	AMOUNT
PERBUS PERMIT-VARIOUS BUS LICENSE & PERMIT S	
801 S CEDAR ST- SITE PLAN REV	\$200.00
TOTAL	\$200.00
CHECK 3621	\$200.00
Total Tendered:	\$200.00
Change:	\$0.00

CITY LIMITS
801 CEDAR STREET
SECTION 5, TOWN 2N, RANGE 1W
CITY OF MASON, INGHAM COUNTY, MICHIGAN



SITE LOCATION
NO SCALE

PROPOSED DEVELOPMENT:

A 4,828 BUILDING ADDITION TO FRONT AND ADDITIONAL PARKING IN NORTH EAST PORTION OF PARCEL.

PROPERTY DATA:

LAND AREA: 6.94 ACRES

TAX ID NUMBER: 33-19-10-05-153-006

ZONING:

EXISTING PARCEL ZONING: C2
PROPOSED PARCEL ZONING: C2

BUILDING REQUIREMENTS:

FRONT SETBACK = 50'
SIDE SETBACK = 10'
SIDE SETBACK = 10'
REAR SETBACK = 10'
MAXIMUM BUILDING HEIGHT = 45'

BUILDING SETBACKS PROVIDED

FRONT SETBACK = 120'
WEST SIDE SETBACK = 47'
EAST SIDE SETBACK = 88'
REAR SETBACK = 91'
PROPOSED BUILDING HEIGHT = 26'

MINIMUM LOT WIDTH = 100'

PROVIDED LOT WIDTH = 326'

MAXIMUM PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 50%
EXISTING PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 11.05%
PROPOSED PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 12.77%

MINIMUM GREENSPACE = 10%

PROPOSED GREENSPACE = 49%

LEGAL DESCRIPTION:

A PARCEL OF LAND BEING PART OF THE NORTHWEST 1/4 OF SECTION 5, TOWNSHIP 2 NORTH, RANGE 1 WEST, VEYAY TOWNSHIP, NOW CITY OF MASON, INGHAM COUNTY, MICHIGAN; BEING SURVEYED AND FURTHER DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE EAST AND WEST 1/4 LINE, OF SECTION 5, T2N, R1W, AND THE EASTERLY RIGHT OF WAY LINE OF U.S. 127 AS FENCED AND OCCUPIED SAID POINT BEING NORTH 89°28'08" EAST PER STATE PLANE COORDINATES, NORTH AMERICAN DATUM OF 1983 (PREVIOUSLY RECORDED IN WARRANTY DEED LIBER 3094, PAGE 123 AS BEING SOUTH 89°25'40" EAST) 67.91 FEET FROM THE WEST 1/4 CORNER, SECTION 5, T2N, R1W, VEYAY TOWNSHIP, INGHAM COUNTY, MICHIGAN; THENCE NORTH 89°28'08" EAST (RECORDED AS SOUTH 89°25'40" EAST) 502.80 FEET ALONG THE EAST AND WEST 1/4 LINE OF SAID SECTION 5; THENCE NORTH 36°01'02" EAST (RECORDED AS NORTH 37°07'14" EAST) 376.30 FEET TO THE SOUTHERLY RIGHT OF WAY LINE OF M-36, CEDAR STREET AS DEFINED IN SURVEY RECORDED IN BOOK 9, PAGE 739; THENCE NORTH 54°04'01" WEST 321.56 FEET (RECORDED AS NORTH 53°27'22" WEST 320.98 FEET) TO THE SOUTHEASTERLY LINE OF PARCEL AS PREVIOUSLY SURVEYED AND RECORDED IN LIBER 4, PAGE 1267, INGHAM COUNTY RECORDS; THENCE ALONG SAID PARCEL THE FOLLOWING THREE COURSES: SOUTH 36°01'39" WEST 157.00 FEET (RECORDED AS SOUTH 36°32'18" WEST 150 FEET); THENCE NORTH 53°58'21" WEST (RECORDED AS NORTH 53°27'42" WEST) 200.00 FEET; THENCE NORTH 36°01'39" EAST 157.00 FEET (RECORDED AS NORTH 36°32'19" EAST 150 FEET); THENCE SOUTH 68°43'50" WEST 235.89 FEET ADJACENT TO THE FENCED AND OCCUPIED RIGHT OF WAY FOR NORTHBOUND EXIT RAMP TO M-36, CEDAR STREET (RECORDED AS SOUTH 68°47'58" WEST 234.9 FEET IN WARRANTY DEED LIBER 3094, PAGE 123 FOR THIS SUBJECT PARCEL); THENCE SOUTHERLY ALONG THE EAST LINE OF TRUNKLINE US-127 RIGHT OF WAY AS PREVIOUSLY DEFINED IN DETERMINATION OF NECESSITY OF RIGHT OF WAY DOCUMENT LIBER 892, PAGES 432 AND 433, INGHAM COUNTY RECORDS, THE FOLLOWING TWO COURSES: SOUTH 13°44'04" WEST (RECORDED AS SOUTH 13°24'58" WEST) 285.85 FEET; THENCE SOUTH 03°14'04" WEST 252.51 FEET (RECORDED AS SOUTH 02°54'58" WEST 248.55 FEET) TO POINT OF BEGINNING ON NORTHWEST 1/4 OF SECTION 5, TOGETHER WITH A PERPETUAL ACCESS EASEMENT AS DEFINED IN DEED LIBER 915, PAGE 266 AND 267, BEING A 75 FOOT EASEMENT OVER THE SOUTHEASTERLY 75 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE:

BEGINNING IN THE CENTERLINE OF NOW EXISTING CEDAR STREET (M-36) AT A POINT LOCATED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SECTION 5, T2N, R1W, CITY OF MASON, INGHAM COUNTY, MICHIGAN, THENCE EAST ON THE NORTH LINE OF SECTION 5, 621.5 FEET TO THE INTERSECTION OF CENTERLINE OF HOWELL ROAD AND KERNS STREET, THENCE SOUTH IN THE CENTERLINE OF KERNS STREET SOUTH 0° 23'42" WEST: 2117.77 FEET TO THE CENTERLINE OF CEDAR STREET; THENCE NORTH 53° 27'42" WEST 67.85 FEET FOR SAID POINT OF BEGINNING, THENCE SOUTH 36° 32'18" WEST 200.00 FEET, THENCE NORTH 53° 27'42" WEST 200.0 FEET, THENCE NORTH 36° 32'18" EAST 200.0 FEET TO THE CENTER OF CEDAR STREET, THENCE SOUTH 53° 27'42" EAST 200.0 FEET TO BEGINNING.

I HEREBY CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH ACT 240, PA OF 1937 AS AMENDED.



Kurt R. Krahulik
LICENSE NO. 046794
DC ENGINEERING
1210 N. CEDAR ST., SUITE B
LANSING, MI 48906
(517) 853-7866

SYMBOLS

- ABANDONED MANHOLE
- PR/EX COMBINED MANHOLE
- PR/EX STORM MANHOLE/CATCHBASIN
- PR/EX STORM CATCH BASIN (CURB)
- PR/EX FLARED END SECTION
- PR/EX STORM DOWNSPOUT
- PR/EX SANITARY MANHOLE
- PR/EX SANITARY CLEANOUT
- PR/EX WATER MANHOLE
- PR/EX WATER VALVE
- PR/EX WATER CURB STOP
- PR/EX WATER SPRINKLER
- PR/EX MONITORING WELL
- PR/EX FIRE HYDRANT
- PR/EX UTILITY RISER
- PR/EX COMMUNICATIONS MANHOLE
- PR/EX GAS VALVE
- PR/EX GAS METER
- PR/EX ELECTRIC MANHOLE
- PR/EX ELECTRIC POWER POLE
- PR/EX ELECTRIC POWER POLE GUY WIRE
- PR/EX ELECTRIC TRANSFORMER
- UTILITY HANDHOLE
- PR/EX LIGHT POLE
- PR/EX POWER POLE WITH LIGHT FIXTURE
- PR/EX FLOOD LIGHT
- PR/EX DECIDUOUS TREE
- PR/EX CONIFEROUS TREE
- STUMP
- PR/EX PARKING METER
- PR/EX MAILBOX
- PR/EX AC UNIT
- PR/EX SIGN
- PR/EX FLAG POLE
- PR/EX BENCH
- PR/EX BIKE RACK
- PR/EX PARKING SPACE COUNT
- PR/EX CONC BALLARD
- TRAFFIC LIGHT
- ITEM TO BE REMOVED
- FOUND MONUMENTATION
- SET CAPPED IRON ROD #
- SECTION CORNER
- SOIL BORING
- BENCHMARK
- SOIL XXX
- SOIL CLASSIFICATION (NCRS)
- SURFACE DRAINAGE PATH DIRECTION

LEGEND

ABBREVIATIONS

- BC BACK OF CURB
- BIT BITUMINOUS
- BLD BUILDING
- BLK BULKHEAD
- BB BOTTOM OF BANK
- C CALCULATED
- CL CENTERLINE
- CB CATCH BASIN
- CO CLEAN OUT
- CMB COMBINED
- CONC CONCRETE
- ELEC ELECTRIC
- EL ELEVATION
- ENC ENCROACHMENT
- EOM EDGE OF METAL
- EX EXISTING
- FC FACE OF CURB
- FS FINISH SURFACE
- FES FLARED END SECTION
- FL FLOW LINE
- FOIR FOUND CAPPED IRON ROD
- GAS GAS LINE
- LF LINEAR FEET
- LS LANDSCAPE
- MH MANHOLE
- (M) MEASURED
- MON MONUMENT
- NO NUMBER
- OC ON CENTER
- OS OFFSET
- PL PROPERTY LINE
- PR PROPOSED
- (R) RECORDED
- POB POINT OF BEGINNING
- POL POINT ON LINE
- R.O.W. RIGHT-OF-WAY
- SAN SANITARY
- SF SQUARE FEET
- STM STORM
- TB TOP OF BANK
- TC TOP OF CURB
- TR TOP OF RETAINING WALL
- TW TOP OF WALK
- TYP TYPICAL
- WTR WATER

LINE TYPES

- PR/EX CURB AND GUTTER
- PR/EX MAJOR CONTOUR
- PR/EX MINOR CONTOUR
- PR/EX STORM SEWER
- PR/EX SANITARY SEWER
- PR/EX UNDERGROUND ELECTRIC LINE
- PR/EX OVERHEAD ELECTRIC LINE
- PR/EX GAS LINE
- PR/EX WATER LINE
- PR/EX COMMUNICATION LINE
- PR/EX STEAM LINE
- PR/EX TREE LINE
- PR/EX FENCE
- RIGHT-OF-WAY
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- HISTORICAL PROPERTY LINE
- EASEMENT
- SETBACK
- SECTION LINE
- SILT FENCE
- DISTURBANCE LIMITS
- RUNOFF AREA
- SOIL TYPE CONTOURS (NCRS)
- CURB REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE REMOVAL
- CONCRETE HATCHING
- BITUMINOUS PAVEMENT HATCHING
- STONE LANDSCAPE HATCHING
- MULCHED LANDSCAPE HATCHING

SHEET INDEX

- 1 CIVIL - COVER
- 2 CIVIL - OVERALL SITE PLAN
- 3 CIVIL - DEMOLITION
- 4 CIVIL - LAYOUT
- 5 CIVIL - GRADING & UTILITIES
- 6 CIVIL - DETAILS

CONTACTS:

PLANNING	ELIZABETH HUDE, DIRECTOR CITY OF MASON PLANNING DEPARTMENT 201 W. ASH ST MASON, MI 48854
TRANSPORTATION	MDOT LANSING TRANSPORTATION CENTER 2700 PORT LANSING RD LANSING, MI 48906 (517) 335-3754
GAS	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
ELECTRIC	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
WATER	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
SANITARY	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
STORM	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200

OWNER	LEISURE TYME LLC 801 N CEDAR MASON, MI 48854
ARCHITECT	PAUL D. BARBOUR AND ASSOCIATES 9617 COLUMBIA HWY. EATON RAPIDS, MI 48827 (517) 663-0088
ENGINEER	DC ENGINEERING PC 1210 NORTH CEDAR ST, SUITE B LANSING, MICHIGAN 48908 (517) 852-7866
CONTRACTOR	WESTSIDE BUILDING COMPANY 3310 BARDAVILLE DRIVE, SUITE 3 LANSING, MI 48906 (517) 749-3898



REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY
2019-05-03 CITY COMMENTS



CITY LIMITS
CIVIL - COVER

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: NONE	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 1 OF 6



LANDSCAPE SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	AMOUNT	SIZE
	CALAMAGROSTIS	'KARL FOERSTER' GRASS	6	10 GAL
	HYDRANGEA PANICULATA	'LIME LIGHT' HYDRANGEA TREE	1	10 GAL
	PINUS MUGO	MUGO PINE	14	10 GAL
	PYRUS CALLERYANA 'BRADFORD'	BRADFORD CALLERY PEAR	7	2.5" CAL.
	TILIA CORDATA 'GREENSPIRE'	LITTLE LEAF LINDEN	5	2.5" CAL.
	EX 3" PEAR		EX	
	EX 16" ELM		EX	

LANDSCAPING REQUIREMENTS:

INTERIOR PARKING LOT LANDSCAPE AREA
REQUIRED: 1 TREE AND 100 SFT OF LANDSCAPE/8 SPACES
TOTAL SPACES = 233 TREES REQUIRED = 233/8 = 29
LANDSCAPING REQUIRED = (233/8) X 100 SFT = 29 X 100 SFT = 2,900 SFT
PROVIDED: 8,200 SF

FRONT (CEDAR STREET) BUFFER (326' AT 10' WDE)
REQUIRED: 1 TREE EVERY 30 LF
316'/30'=10.5= 11 TREES
PROVIDED: 3 (EX)
5 (PR)
8 TOTAL

SIDE (EAST PROPERTY LINE) BUFFER (370' AT 10' WDE)
REQUIRED: 1 TREE EVERY 30 LF
370'/30'=12.3= 13 TREES
PROVIDED: 1 (EX)
5 (PR)
6 TOTAL

REAR BUFFER (492' AT 10' WDE)
REQUIRED: 1 TREE EVERY 30 LF
492'/30'=16.4= 17 TREES
PROVIDED: NONE

SIDE (WEST PROPERTY LINE) BUFFER (770' AT 10' WDE)
REQUIRED: 1 TREE EVERY 30 LF
770'/30'=25.7= 26 TREES
PROVIDED: NONE

PARKING:

REQUIRED PARKING FOR ENTIRE SITE:

RESTAURANT = 1 SPACE/50 SF OF USEABLE FLOOR AREA = 55 SPACES
= 2,741 SF (EX)/50 SF (EX)
ARCADE = 1 SPACE/100 SF OF USEABLE FLOOR AREA = 5 SPACES
= 483 SF (EX)/100 SF = 31 SPACES
= 3,015 SF (PR)/100 SF
BOWLING ALLEY = 5 SPACES/1 BOWLING LANE = 120 SPACES
= 24 LANES (EX) X 5 SPACES
VOLLEY BALL COURT = 4 SPACES/1 COURT = 12 SPACES
= 3 COURTS (EX) X 4 SPACES = 223 SPACES

EX PARKING:
ADA = 4
STD = 240
TOTAL = 244

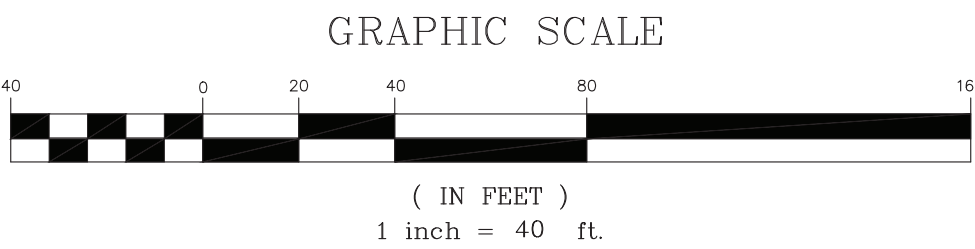
PR PARKING:
ADA = 7
STD = 226 [42 10'X18' SPACES (18.6%)/184 10'X20' SPACES (81.4%)]
TOTAL = 233

PARKING SPACE DIMENSIONS:

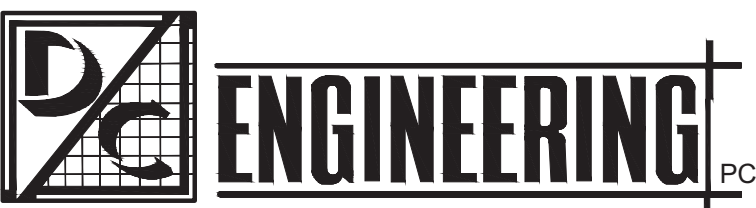
1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

LOADING ZONE:

1. DELIVERIES TO BE PERFORMED DAILY AT NON-PEAK PARKING USAGE



REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY
2019-05-03 CITY COMMENTS



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

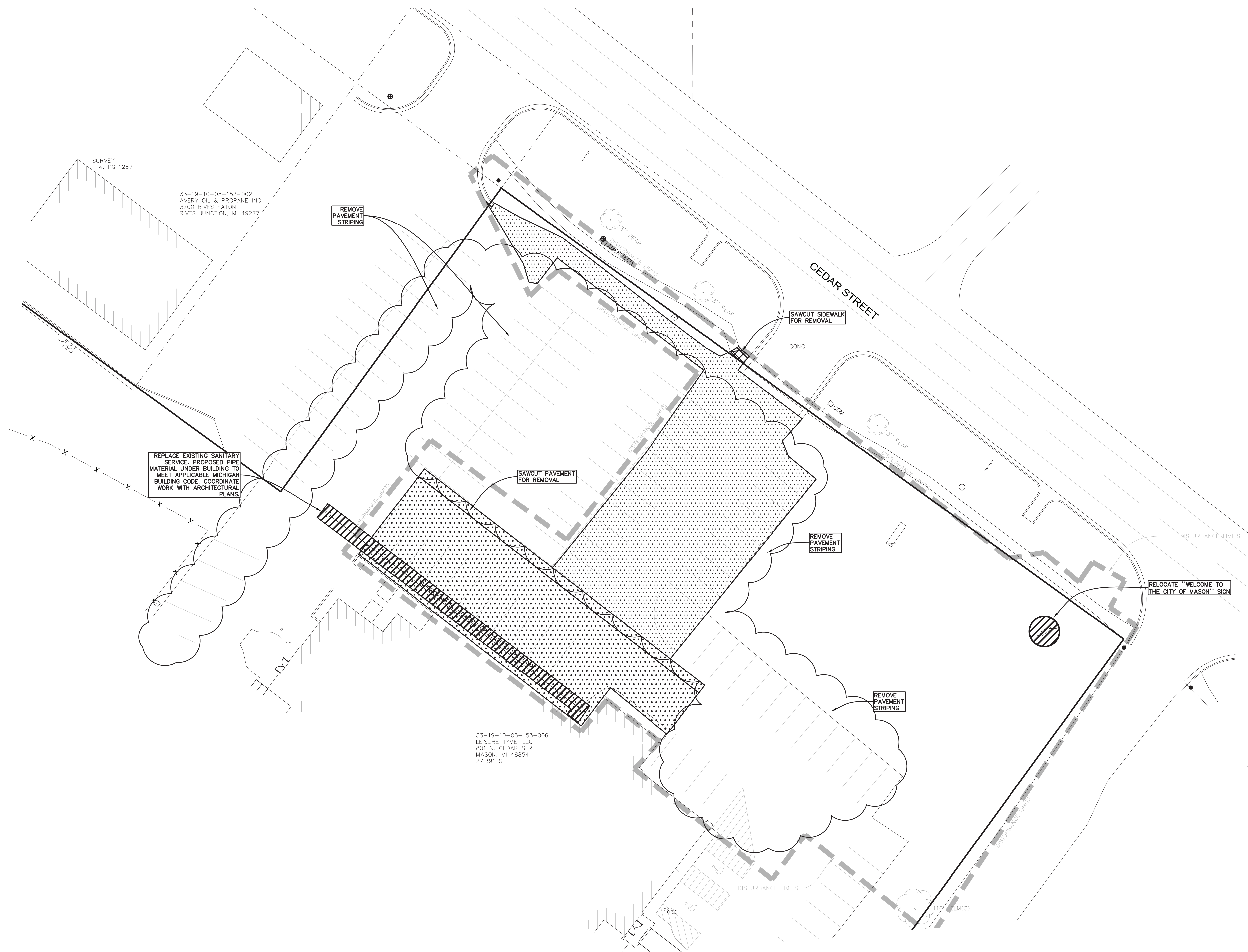
CITY LIMITS
CIVIL - OVERALL SITE PLAN

WESTSIDE BUILDING COMPANY
3310 BARDVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 40' DRAWN BY: EGS REVIEWED BY: KRK
DATE: 2019-01-10 SHEET: 2 OF 6



WESTSIDE - CITY LIMITS



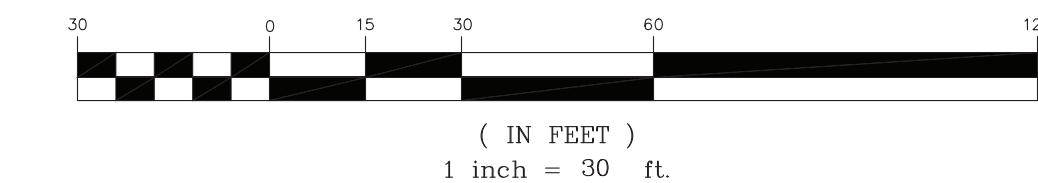
DEMOLITION NOTES

1. SAW CUT EXISTING EDGE OF PAVEMENT IMMEDIATELY PRIOR TO NEW PAVEMENT. DAMAGED EDGES SHALL BE RE-CUT PRIOR TO CONSTRUCTION OF NEW PAVEMENT.
2. CURB AND GUTTER TO BE REMOVED TO NEXT JOINT.
3. CONTRACTOR RESPONSIBLE FOR DISPOSAL OF ALL MATERIALS REMOVED FROM SITE.
4. BURNING IS NOT APPROVED

SUPPLEMENTAL LEGEND:

- DEMO LIMITS
- CURB REMOVAL
- CONCRETE REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- ITEM TO BE REMOVED

GRAPHIC SCALE



REVISIONS	
2019-03-05	CITY COMMENTS
2019-03-29	REVISED BOUNDARY
2019-05-03	CITY COMMENTS

1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS
CIVIL - DEMOLITION

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

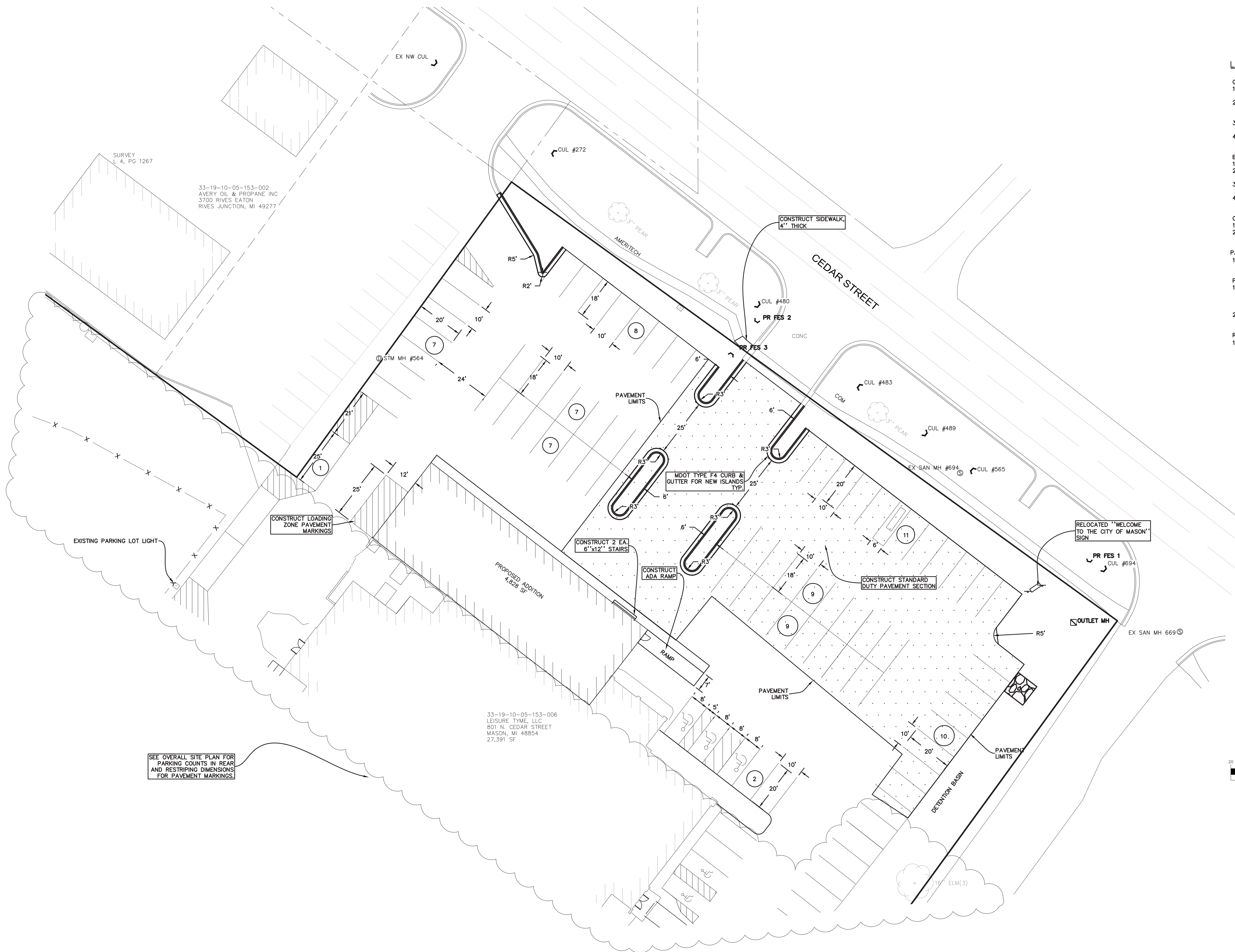
SCALE: 1" = 20'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 3 OF 6

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Michigan's
One-Call
Utility
Notification
Organization

1-800-482-7171
on the net at: www.missdig.org

WESTSIDE - CITY LIMITS



LAYOUT NOTES:

- GENERAL NOTES:
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS.
 2. STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MASON STANDARDS. CONTRACTOR SHALL OBTAIN A CITY OF MASON SEWER PERMIT PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL OBTAIN A MDOT RIGHT OF WAY PERMIT PRIOR TO CONSTRUCTION WITHIN CEDAR STREET.
 4. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL PERMITS, INCLUDING FEES, PRIOR TO WORK.

- BITUMINOUS PAVEMENT
1. BITUMINOUS PAVEMENT SHALL BE MDOT MIXTURE 13A.
 2. AGGREGATE BASE SHALL BE MDOT 22A. AGGREGATE BASE SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
 3. SUBBASE SHALL BE MDOT TYPE II GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM DENSITY.
 4. PAVEMENTS SHALL BE CONSTRUCTED TO THE CROSS SECTION INDICATED IN THE PLANS.

- CONCRETE
1. ALL CONCRETE SHALL BE MDOT TYPE P1.
 2. PLACE 1/2" INCH EXPANSION JOINT AT ALL CONCRETE TO CONCRETE INTERFACE AND CONCRETE TO BUILDING INTERFACE.

- PARKING
1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

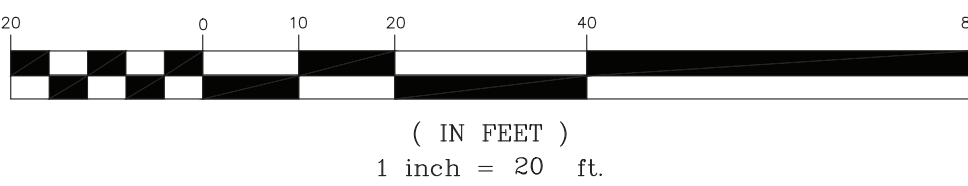
- PAVEMENT MARKINGS
1. PARKING LOT STRIPPING SHALL BE TWO COATS MDOT REGULAR DRY PAINT PLACED NO EARLIER THAN 14 DAYS AFTER PAVING. STANDARD PARKING LOT SPACES SHALL BE WHITE. ADA PARKING SPACES SHALL BE BLUE.
 2. GORE STRIPPING SHALL BE AT A 45-DEGREE ANGLE TO THE PRIMARY LINE AND STRIPPED AT 34" CENTERS.

- RESTORATION
1. LAWN-AREAS SHALL BE PREPARED WITH 3" TOPSOIL SURFACE, SEEDED, MULCHED, AND FERTILIZED. PRIOR TO PLACING TOPSOIL THE UNDERLYING MATERIALS SHALL BE LOOSENEED TO A DEPTH OF 4". SEED SHALL BE MDOT TYPE THM.

PARKING SPACE DIMENSIONS:

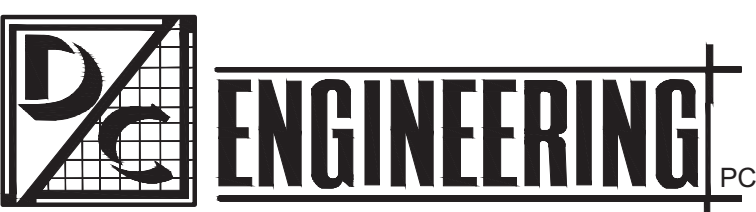
1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

GRAPHIC SCALE



REVISIONS

2019-03-05	CITY COMMENTS
2019-03-29	REVISED BOUNDARY
2019-05-03	CITY COMMENTS



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS
CIVIL - LAYOUT

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 4 OF 6

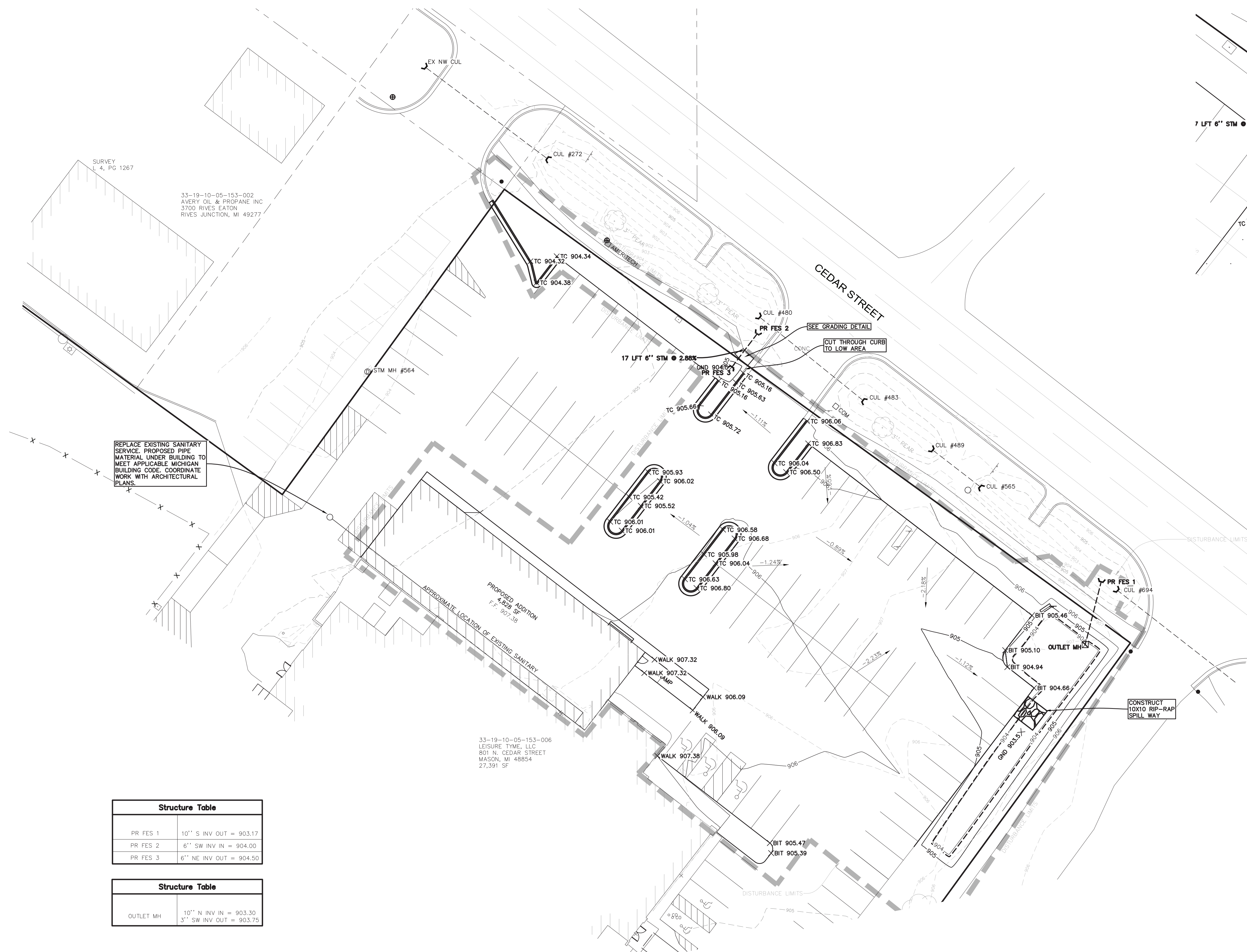


SEE OVERALL SITE PLAN FOR
PARKING COUNTS IN REAR
AND RESTRIPIING DIMENSIONS
FOR PAVEMENT MARKINGS.

33-19-10-05-153-006
LEISURE TIME, LLC
801 N. CEDAR STREET
MASON, MI 48854
27,391 SF

33-19-10-05-153-002
AVERY OIL & PROPANE INC
3700 RIVES EATON
RIVES JUNCTION, MI 49277

SURVEY
L 4, PG 1267

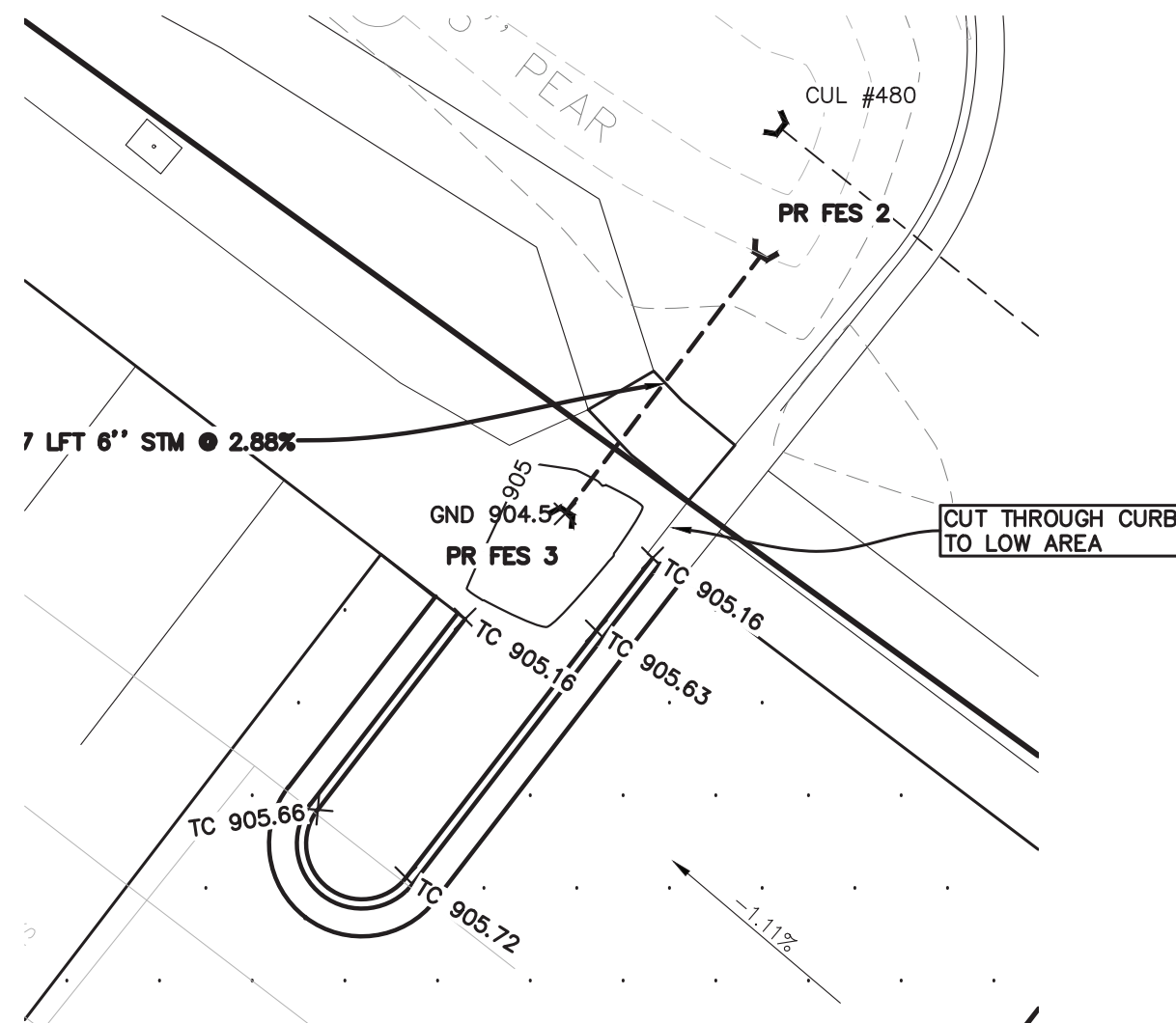


REPLACE EXISTING SANITARY SERVICE. PROPOSED PIPE MATERIAL UNDER BUILDING TO MEET APPLICABLE MICHIGAN BUILDING CODE. COORDINATE WORK WITH ARCHITECTURAL PLANS.

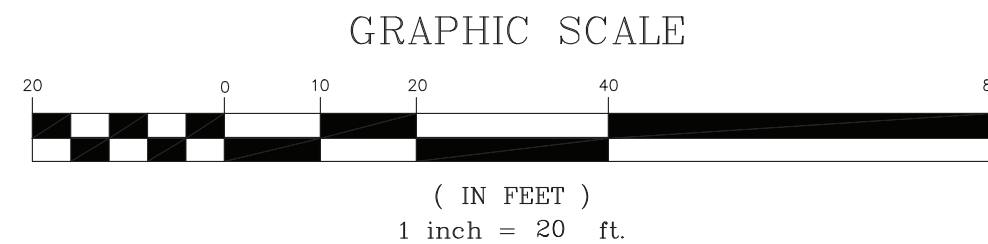
Structure Table	
PR FES 1	10" S INV OUT = 903.17
PR FES 2	6" SW INV IN = 904.00
PR FES 3	6" NE INV OUT = 904.50

Structure Table	
OUTLET MH	10" N INV IN = 903.30 3" SW INV OUT = 903.75

33-19-10-05-153-006
LEISURE TIME, LLC
801 N. CEDAR STREET
MASON, MI 48854
27,391 SF



GRADING DETAIL
SCALE: 1" = 10'



REVISIONS	
2019-03-05	CITY COMMENTS
2019-03-29	REVISED BOUNDARY
2019-05-03	CITY COMMENTS
2019-05-03	CITY COMMENTS



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
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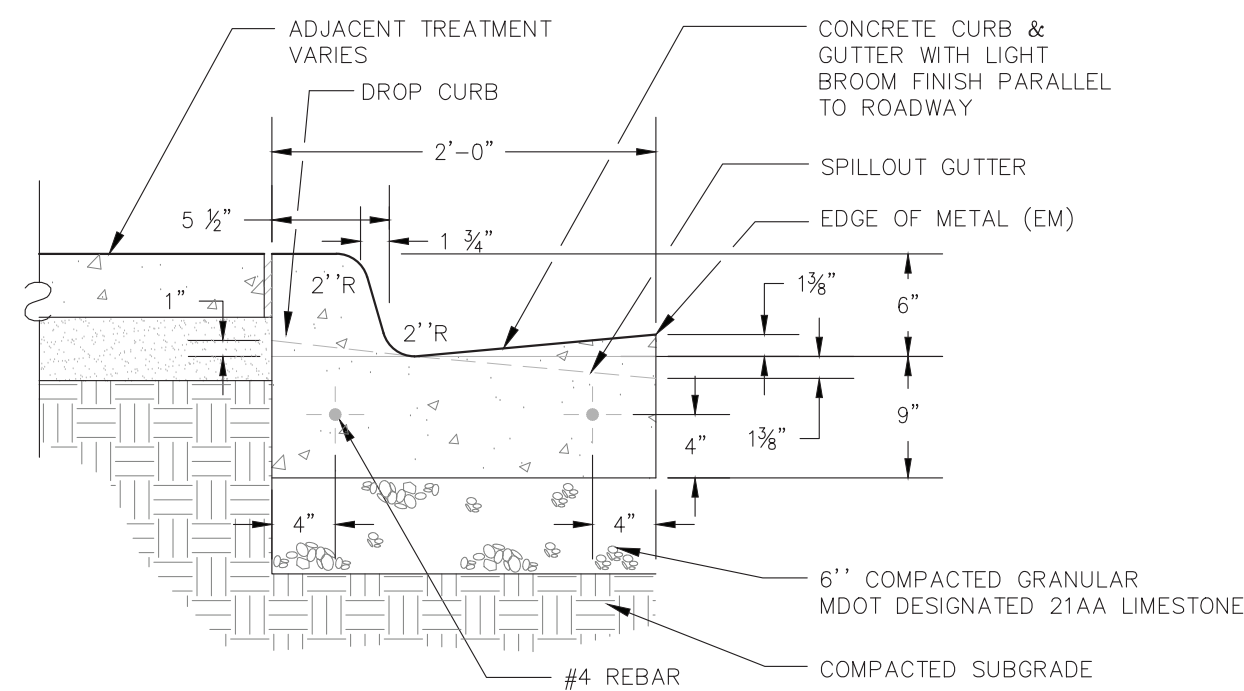
CITY LIMITS
CIVIL - GRADING + UTILITIES

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 5 OF 6

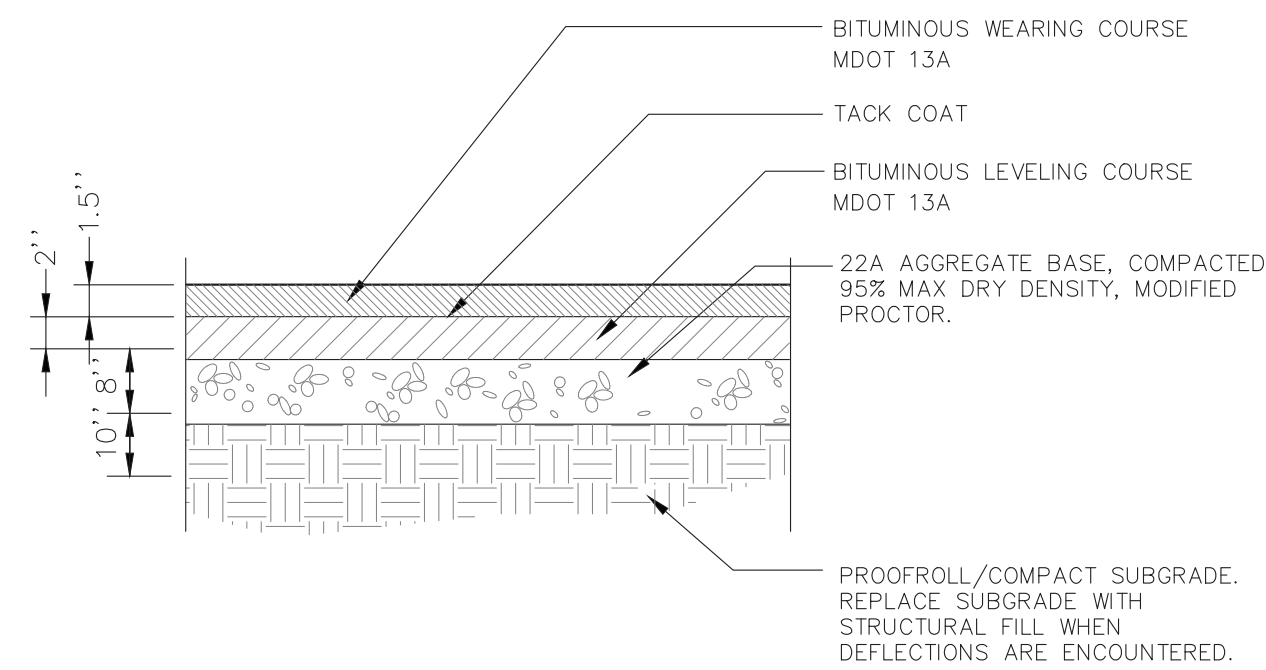


WESTSIDE - CITY LIMITS



MDOT TYPE F4 - CURB AND GUTTER

NOT TO SCALE



STANDARD DUTY BITUMINOUS PAVEMENT

NOT TO SCALE

SET ROOTBALL LEVEL TO GRADE OR SLIGHTLY ABOVE GRADE (1/2") IF IN CLAY SOIL.

PRUNE SUCKERS OFF. ROOT FLARE MUST SHOW ABOVE FINISHED GRADE.

CENTER ROOTBALL IN PLANTING HOLE. LEAVE BOTTOM OF PLANTING HOLE FIRM. DO NOT AMEND SOIL UNLESS PLANTING IN POOR OR SEVERELY DISTURBED SOIL OF BUILDING RUBBLE. USE WATER TO SETTLE SOIL AND REMOVE AIR POCKETS AND FIRMLY SET TREE. GENTLY TAMP IF NEEDED.

DO NOT STAKE UNLESS IN HEAVY CLAY SOIL, WINDY CONDITIONS, 3" OR GREATER DIAMETER TREE TRUNK, OR LARGE CROWN. IF STAKING IS NEEDED:

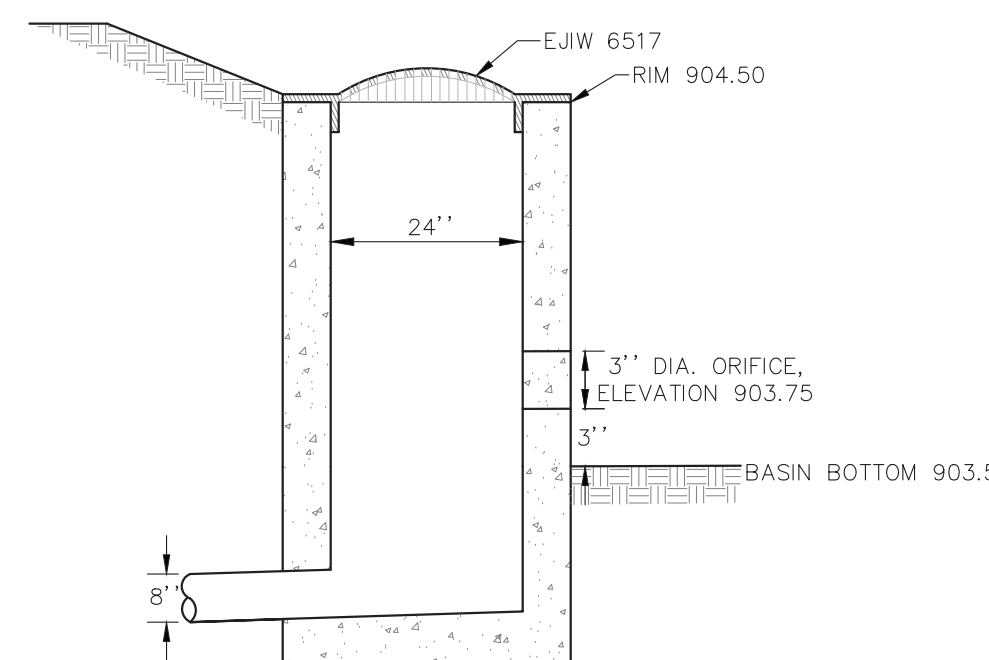
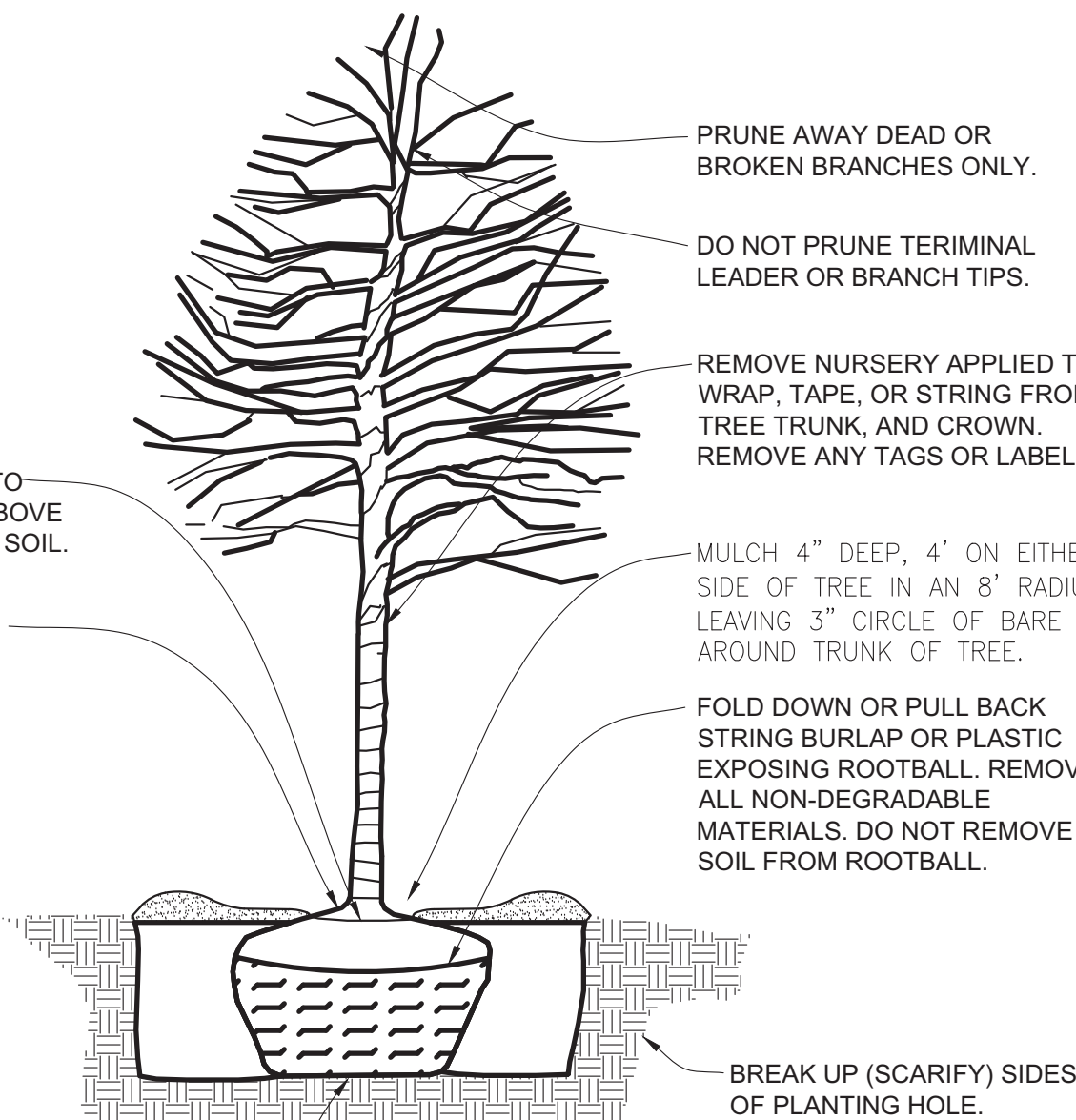
1. STAKE WITH 2"x2" HARDWOOD STAKES OR APPROVED METAL POSTS DRIVEN INTO THE SOIL ONE FOOT OUTSIDE THE ROOT BALL.
2. LOOSELY STAKE TREE TRUNK TO ALLOW FOR TRUNK FLEXING.
3. STAKE TREES JUST BELOW FIRST BRANCH WITH APPROPRIATELY SIZED EYE BOLT CONNECTED TO THE POSTS WITH ELEVEN GAGE WIRE. TWO PER TREE ON OPPOSITE SIDES OF THE TREE. DO NOT USE A ROPE OR WIRE THROUGH A HOSE.
4. REMOVE ALL STAKING MATERIALS AFTER ONE YEAR.

TREE PLANTING DETAIL

NOT TO SCALE

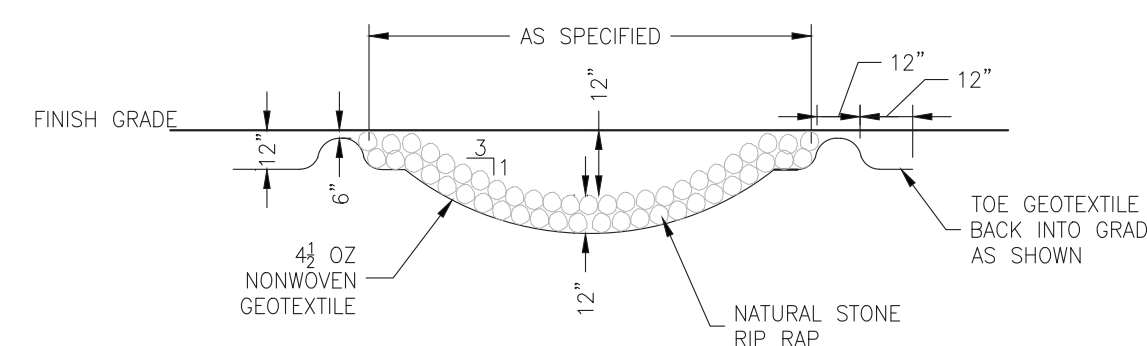
HOLE DEPTH = HEIGHT OF ROOTBALL

HOLE WIDTH = 3 TIMES WIDTH OF ROOTBALL



OUTLET MANHOLE DETAIL

NOT TO SCALE



RIP RAP SPLASH PAD

NOT TO SCALE

NOTE:
DO NOT TRIM EVERGREENS

SET PLANTING BED 2" HIGHER THAN ADJACENT GRADE

PLANTING MIXTURE SHALL BE CONTINUOUS FOR SHRUB BEDS, POCKET PLANTING SHALL NOT BE PERMITTED

COVER ENTIRE PLANTING BED WITH MULCH TAPER MULCH TO CENTER OF PLANT

3" SHREDDED BARK MULCH

PLANTING MIXTURE

SCARIFY SETTING BED AND BED WALLS

WEED BARRIER FABRIC

SPACING VARIES

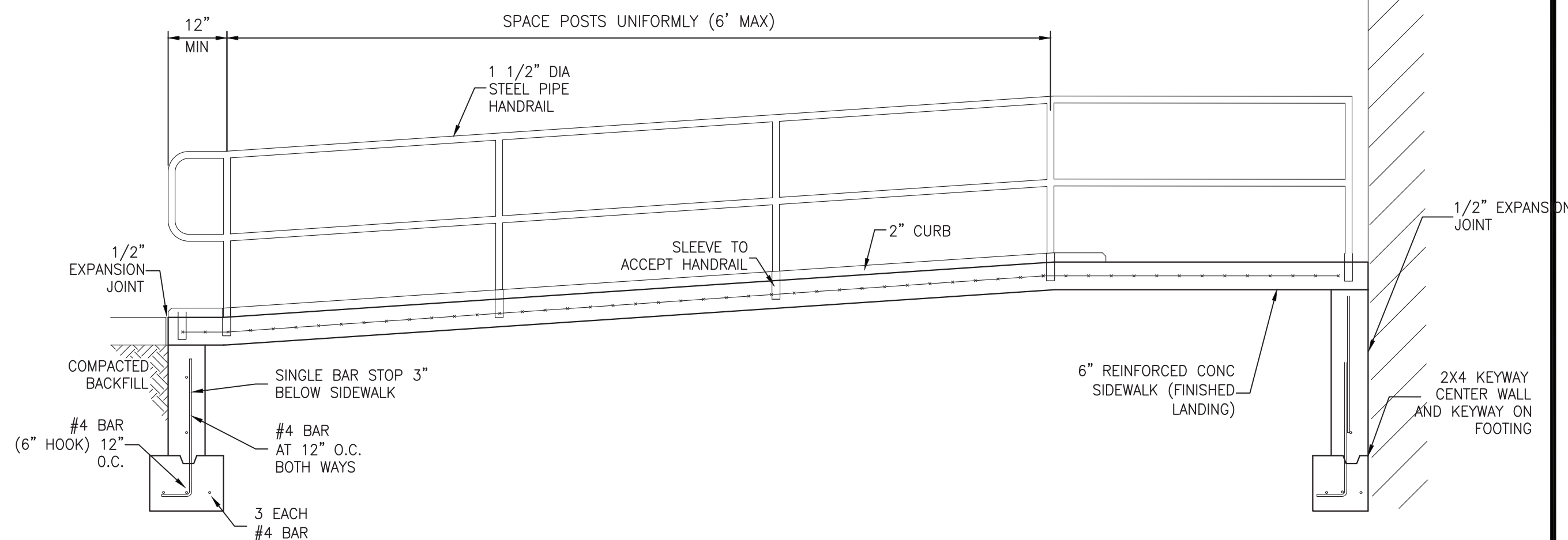
18"

6"

6"

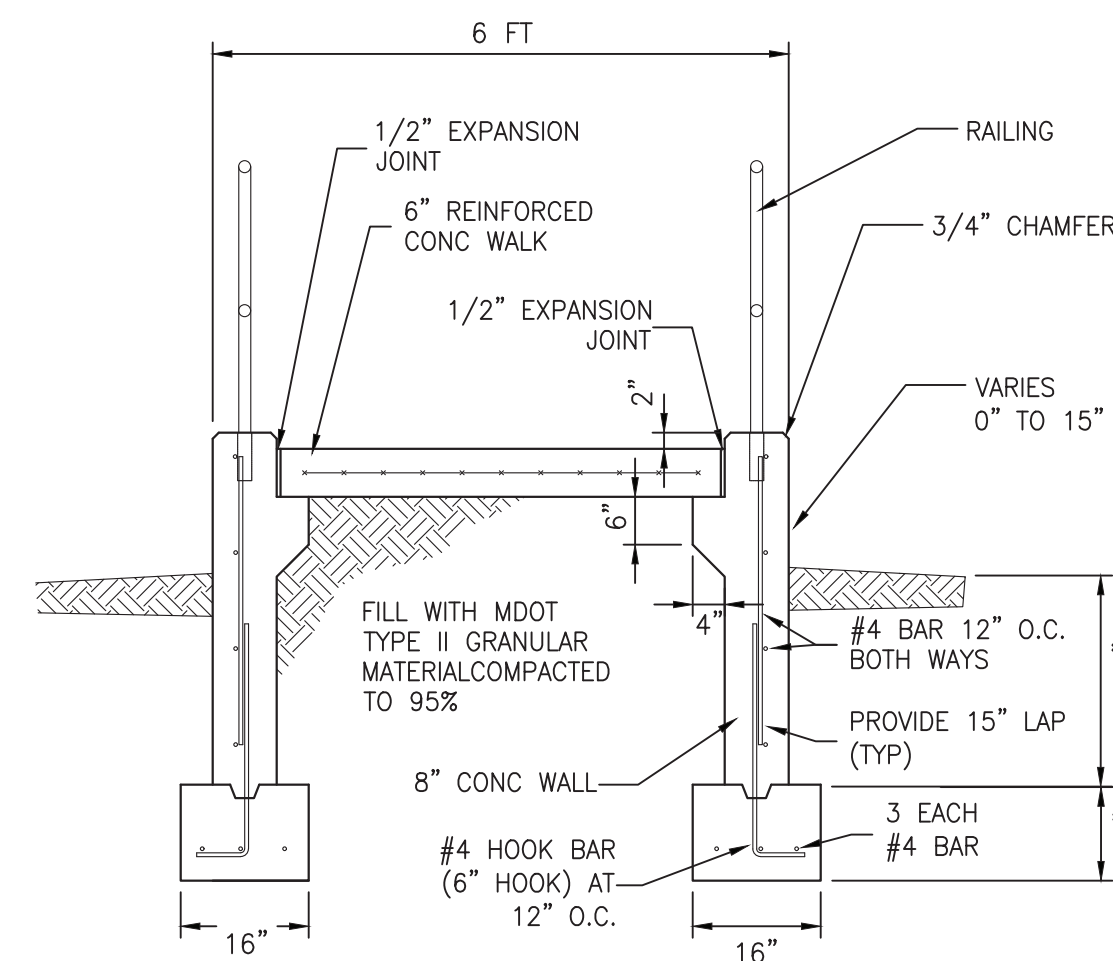
SHRUB PLANTING

NO SCALE



TYPICAL RAMP/STAIR SECTION

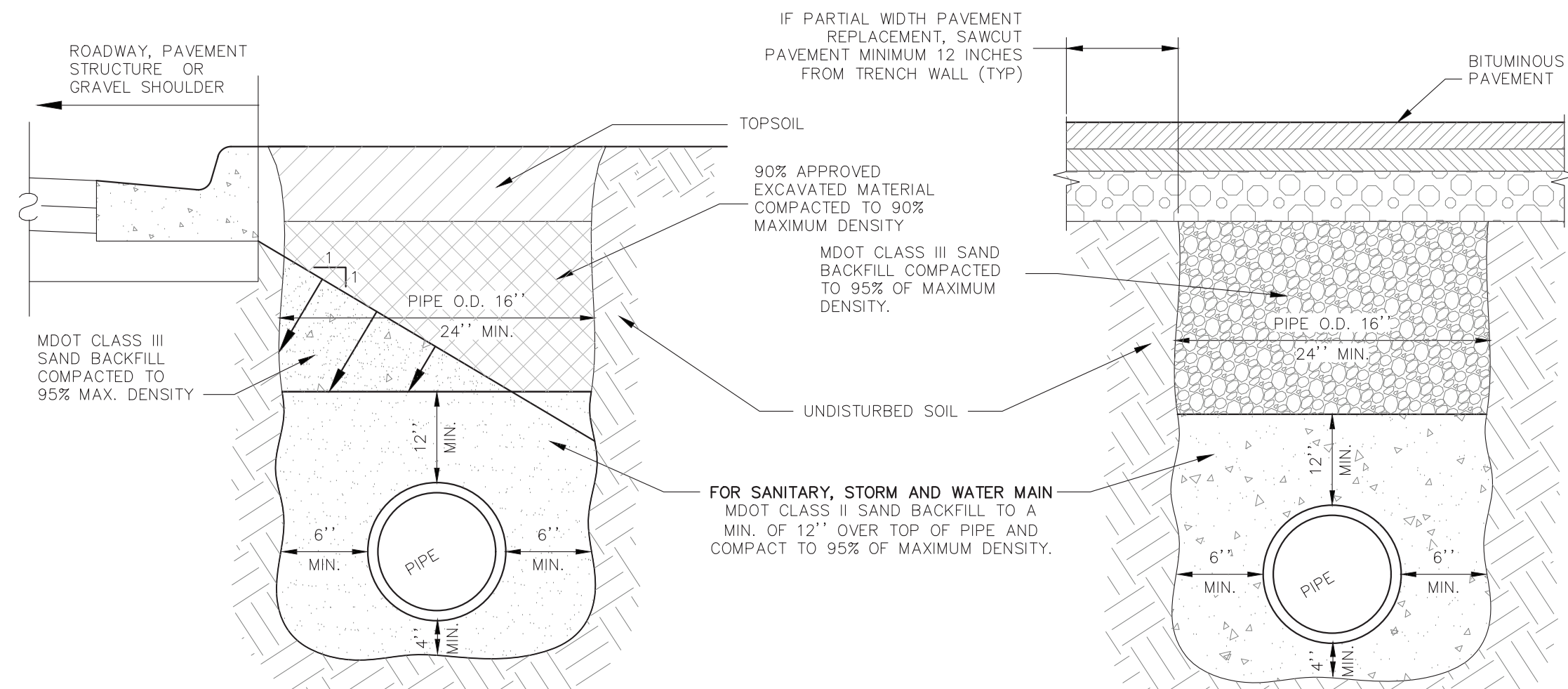
NOT TO SCALE



TYPICAL RAMP/STAIR CROSS SECTION

NOT TO SCALE

- NOTES:
1. PLACE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN EXISTING STRUCTURE AND NEW SIDEWALK, RAMPS, AND LANDINGS.
 2. BROOM FINISH CONCRETE RAMPS
 3. VERTICAL CONCRETE SURFACES, HAND RUB FINISH TO REMOVE ALL FORM MARKS. ALL AIR POCKETS AND FORM TIES SHALL BE GROUTED.



TYPICAL UTILITIES TRENCH WITHIN 1:1 INFLUENCE OF PAVEMENT SURFACES AND/OR WITHIN GREEN SPACE AREA DETAIL

NOT TO SCALE

UTILITY TRENCH UNDER PAVED AREAS DETAIL

NOT TO SCALE



ADA SIGN DETAILS

NOT TO SCALE

REVISIONS

2019-03-05 CITY COMMENTS

2019-03-29 REVISED BOUNDARY

2019-05-03 CITY COMMENTS



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

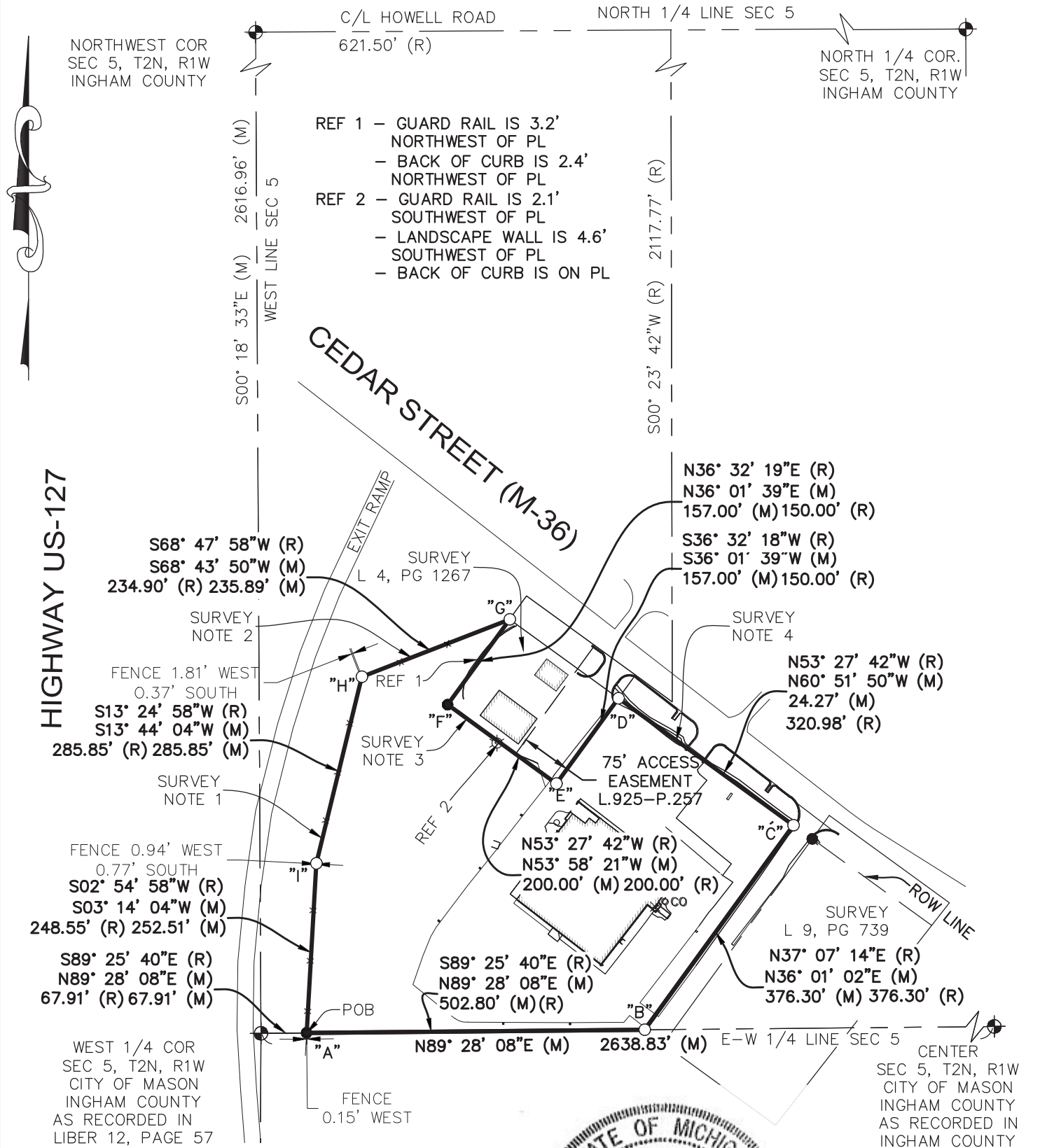
CITY LIMITS
CIVIL - DETAILS

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20' DRAWN BY: EGS REVIEWED BY: KRK
DATE: 2019-01-10 SHEET: 6 OF 6

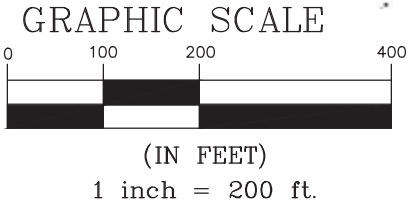


Certificate of Survey



NOTE:
SEE LEGEND ON SHEET 2 OF 4
SEE CORNER DESCRIPTION GRID ON SHEET 4 OF 4
ALL EASEMENTS OF USE OR RECORD ARE NOT SHOWN ON THIS DRAWING
SEE SURVEY NOTES ON SHEET 2 OF 4

BASIS OF BEARING
NORTH AMERICAN DATUM OF 1983 (NAD83), PER GPS OBSERVATION,
MICHIGAN SOUTH ZONE.



CURT R MERROW
Professional Surveyor No. 47997
DATE: 2019/03/28

ENGINEERING PC

1210 N. CEDAR St., Suite B
LANSING, Michigan 48906
PHONE: (517) 853-7866
FAX: (517)-853-7869

BOUNDARY SURVEY
SURVEYED FOR:
WESTSIDE BUILDING CO.
913 LAURELWOOD DR
LANSING, MI 48917

FIELD: CRM	COMP: CRM
DRWG: RWL	CHKD: CRM
FILE WESTSIDE: CITY LIMITS	
SHEET 1 OF 4	SHEET(S)

Certificate of Survey

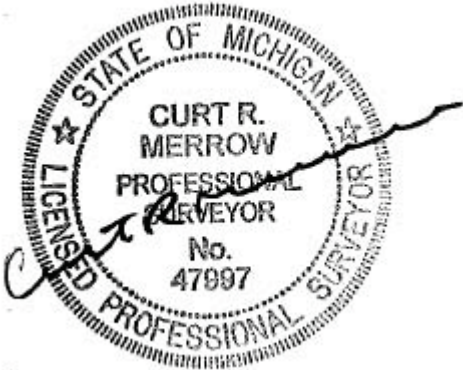
SURVEY NOTES:

DURING THE COURSE OF THE SURVEY, IT WAS FOUND THERE WERE SUBSTANTIAL DIFFERENCES BETWEEN DESCRIBED AND OCCUPIED LINES OF OWNERSHIP. THE NOTES BELOW IDENTIFY THE SIGNIFICANT ADJUSTMENTS TO THE AS PROVIDED LEGAL DESCRIPTION.

- 1. THE MDOT RIGHT OF WAY WAS HELD ALONG THE WEST LINE OF THE SITE. THE WEST LINE OF SUBJECT PARCEL WAS SURVEYED AND DEFINED PER TRUNKLINE US-127 RIGHT OF WAY DEFINED IN DETERMINATION OF NECESSITY OF RIGHT OF WAY DOCUMENT LIBER 892, PAGE 432 AND 433, INGHAM COUNTY RECORDS AND SHOWN ON MDOT RIGHT OF WAY MAP, SHEET 24, DATED 2-03-2006. THE EXISTING RIGHT OF WAY FENCE ALONG THE EAST SIDE OF SAID HIGHWAY IS CONSISTANT WITH THE COMMON LINE BETWEEN PROPERTIES AS DEFINED BY MDOT IN ABOVE DOCUMENTS.
- 2. THE NORTHWESTERLY PROPERTY LINE WAS SURVEYED BY HOLDING THE DEFLECTION POINT AT LOCATION CORNER "H". THIS CORNER WAS DEFINED BY MDOT IN DOCUMENT LIBER 892, PAGE 433. THIS PORTION OF RIGHT OF WAY AS DEFINED BY MDOT IN ABOVE SAID DETERMINATION OF NECESSITY DOCUMENT DID NOT MATCH THAT WHICH WAS OCCUPIED BY MDOT RIGHT OF WAY FENCE. THE BEARING ALONG THIS LEG OF THE PROPERTY APPEARS TO BE A SCRIVENER ERROR IN SAID DOCUMENT. THE NORTHEASTERLY END OF THIS PROPERTY LINE WAS HELD WHERE THE 43 FEET RIGHT OF WAY OF M-36 IS DEFINED IN SURVEY RECORDED IN LIBER 4, PAGE 1267. THE LINE SURVEYED CLOSELY MATCHES THE OCCUPIED RIGHT OF WAY FENCE AS PREVIOUSLY CONSTRUCTED AND OCCUPIED BY BOTH PARTIES.
- 3. THIS LINE WAS HELD BASED ON THE ADJACENT PARCEL AS WAS PREVIOUSLY SURVEYED IN 1986, BY POLARIS SURVEYING CO, SURVEY LIBER 4, PAGE 1267. THIS LINE WAS PERPETUATED BY UNRECORDED SITE PLAN SURVEY BY MR. GLENN A. FAUSER, PS 18657, DATED 3-18-1998. THE SAID ADJACENT PARCEL AS SHOWN WAS RETRACED DURING THIS SURVEY FROM THE NORTHWEST CORNER OF SECTION 5. A 1/2" IRON WAS FOUND AT THE SOUTHWESTERLYMOST CORNER OF THIS PARCEL. THE ABOVE REFERENCED SITE PLAN WHICH WAS COMPLETED IN 1998 APPEARS TO BE CONSISTANT WITH FEATURES BUILT ON SITE AND CURRENTLY IN PLACE ON SITE. DURING THE COURSE OF THIS SUBJECT SURVEY, THE PREVIOUSLY SURVEYED, MONUMENTED, AND DEVELOPED PROPERTY DATING TO 1986 WAS HELD. NO ADDITIONAL INFORMATION WAS FOUND TO DEFINE THESE COMMON LINES IN A DIFFERENT LOCATION.
- 4. THE RIGHT OF WAY FOR THE SOUTHWEST LINE OF STATE TRUNKLINE M-36, CEDAR STREET WAS DEFINED BASED ON PRE-EXISTING SURVEYS ON EACH SIDE OF THIS SEGMENT OF RIGHT OF WAY LINE. SURVEYS WHICH WERE USED WAS THAT AS DEFINED IN BOOK 9 OF SURVEYS, PAGE 739 TO THE SOUTHEAST AND HOLDING THE RIGHT OF WAY POSITION AS DEFINED IN LIBER 4 OF SURVEYS, PAGE 1267 TO THE NORTHWEST.

LEGEND:

- = FOUND PROPERTY IRON
- = SET CAPPED IRON
ROD #47997
- ⊙ = SECTION CORNER
- = PROPERTY LINE
- - - - - = SECTION LINE
- = ADJACENT PARCEL LINE
- - - - - = RIGHT-OF-WAY
- REF = REFERENCE
- ROW = RIGHT-OF-WAY
- PL = PROPERTY LINE
- POB = PLACE OF BEGINNING
- P.O.L. = POINT ON LINE
- (R) = PREVIOUSLY RECORDED AS
- (M) = MEASURED
- "A" = CORNER REFERENCE



CURT R MERROW

Professional Surveyor No. 47997
DATE: 2019/03/28



1210 N. CEDAR St., Suite B
LANSING, Michigan 48906
PHONE: (517) 853-7866
FAX: (517)-853-7869

BOUNDARY SURVEY

SURVEYED FOR:
WESTSIDE BUILDING CO.
913 LAURELWOOD DR
LANSING, MI 48917

FIELD:	CRM	COMP:	CRM
DRWG:	RWL	CHKD:	CRM
FILE	WESTSTIDE: CITY LIMITS		
SHEET	2	OF 4	SHEET(S)

Certificate of Survey

**LEGAL DESCRIPTION AS PROVIDED:
PER WARRANTY DEED: LIBER 3094 – PAGE 123**

801 NORTH CEDAR STREET, BEING PROPERTY NUMBER 33-19-10-05-153-006:

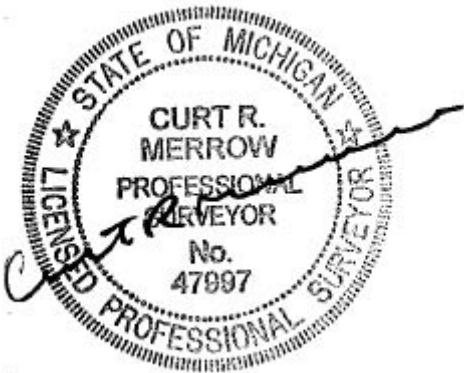
BEGINNING ON THE EAST AND WEST 1/4 LINE, OF SECTION 5, CITY OF MASON, 83.6 FEET EAST OF THE WEST 1/4 CORNER OF SAID SECTION, THENCE EAST 491.1 FEET; THENCE NORTH 36°32'18" EAST 367.75 FEET SOUTHERLY TO CEDAR STREET; THENCE NORTH 53°27'42" WEST: 320.98 FEET; THENCE SOUTH 36°32'18" WEST 150 FEET; THENCE NORTH 53°27'42" WEST 200 FEET; THENCE NORTH 36°32'18" EAST 150 FEET; THENCE SOUTH 68°47'58" WEST 234.9 FEET; THENCE SOUTH 13°24'58" WEST 285.85 FEET; THENCE SOUTH 02°54'58"; THENCE WEST 248.55 FEET TO THE POINT OF BEGINNING ON NORTHWEST 1/4 SECTION 5, T2N, R1W, TOGETHER WITH A 75 FOOT EASEMENT OVER THE SOUTHEASTERLY 75 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE:

BEGINNING IN THE CENTERLINE OF NOW EXISTING CEDAR STREET (M-36) AT A POINT LOCATED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SECTION 5, T2N, R1W, CITY OF MASON, INGHAM COUNTY, MICHIGAN, THENCE EAST ON THE NORTH LINE OF SECTION 5, 621.5 FEET TO THE INTERSECTION OF CENTERLINES OF HOWELL ROAD AND KERNS STREET, THENCE SOUTH IN THE CENTERLINE OF KERNS STREET SOUTH 0°23'42" WEST 2117.77 FEET TO THE CENTERLINE OF CEDAR STREET, THENCE NORTH 53°27'42" WEST 67.85 FEET FOR SAID POINT OF BEGINNING, THENCE SOUTH 36°32'18" WEST 200.00 FEET, THENCE NORTH 53°27'42" WEST 200.0 FEET, THENCE NORTH 36°32'18" EAST 200.0 FEET TO THE CENTER OF CEDAR STREET. THENCE SOUTH 53°27'42" EAST 200.0 FEET TO BEGINNING, THE FOREGOING PROPERTY MAY ALSO BE DESCRIBED A:S FOLLOWS ACCORDING TO A CERTAIN SURVEY:

BEGINNING AT THE INTERSECTION OF THE EAST AND WEST 1/4 LINE, OF SECTION 5, T2N, R1W, AND THE EASTERLY RIGHT OF WAY LINE OF U.S. 127 AS FENCED AND OCCUPIED SAID POINT BEING SOUTH 89°25'40" EAST 67.91 FEET FROM THE WEST 1/4 CORNER, SECTION 5, T2N, R1W, VEVAY TOWNSHIP, INGHAM COUNTY, MICHIGAN; THENCE SOUTH 89°25'40" EAST 502.80 FEET ALONG THE EAST AND WEST 1/4 LINE OF SAID SECTION 5; THENCE NORTH 37°07'14" EAST 376.30 FEET TO THE SOUTHERLY RIGHT OF WAY LINE OF M-36, CEDAR STREET; THENCE NORTH 53° 27'42" WEST 320.98 FEET; THENCE SOUTH 36°32'18" WEST 150 FEET; THENCE NORTH 53° 27'42" WEST 200 FEET; THENCE NORTH 36°32'19" EAST 150 FEET; THENCE SOUTH 68°47'58" WEST 234.9 FEET; THENCE SOUTH 13°24'58" WEST 285.85 FEET; THENCE SOUTH 02°54'58" WEST 248.55 FEET TO POINT OF BEGINNING ON NORTHWEST 1/4 OF SECTION 5, TOGETHER WITH A 75 FOOT EASEMENT OVER THE SOUTHEASTERLY 75 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE:

BEGINNING IN THE CENTERLINE OF NOW EXISTING CEDAR STREET (M-36) AT A POINT LOCATED AS FOLLOWS: BEGINNING AT THE NORTHWEST COMER OF SECTION 5, T2N, R1W, CITY OF MASON, INGHAM COUNTY, MICHIGAN, THENCE EAST ON THE NORTH LINE OF SECTION 5, 621.5 FEET TO THE INTERSECTION OF CENTERLINES OF HOWELL ROAD AND KERNS STREET, THENCE SOUTH IN THE CENTERLINE OF KERNS STREET SOUTH 0° 23'42" WEST: 2117.77 FEET TO THE CENTERLINE OF CEDAR STREET, THENCE NORTH 53° 27'42" WEST 67.85 FEET FOR SAID POINT OF BEGINNING, THENCE SOUTH 36° 32'18" WEST 200.00 FEET, THENCE NORTH 53° 27'42" WEST 200.0 FEET, THENCE NORTH 36° 32'18" EAST 200.0 FEET TO THE CENTER OF CEDAR STREET. THENCE SOUTH 53° 27'42" EAST 200.0 FEET TO BEGINNING.

SEE LEGAL DESCRIPTION AS SURVEYED SHEET 4 OF 4



CURT R MERROW

Professional Surveyor No. 47997
DATE: 2019/03/28



1210 N. CEDAR St., Suite B
LANSING, Michigan 48906
PHONE: (517) 853-7866
FAX: (517)-853-7869

BOUNDARY SURVEY

SURVEYED FOR:
WESTSIDE BUILDING CO.
913 LAURELWOOD DR
LANSING, MI 48917

FIELD:	CRM	COMP:	CRM
DRWG:	RWL	CHKD:	CRM
FILE	WESTSTIDE: CITY LIMITS		
SHEET	3	OF 4	SHEET(S)

Certificate of Survey

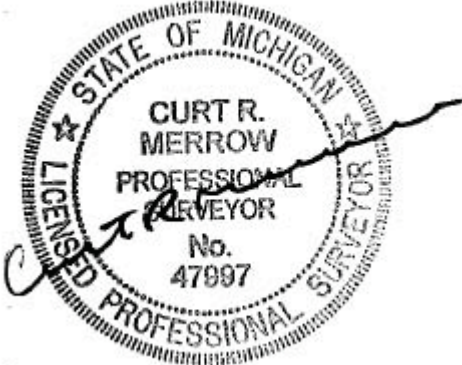
LEGAL DESCRIPTION AS SURVEYED:

A PARCEL OF LAND BEING PART OF THE NORTHWEST 1/4 OF SECTION 5, TOWNSHIP 2 NORTH, RANGE 1 WEST, VEVAY TOWNSHIP, NOW CITY OF MASON, INGHAM COUNTY, MICHIGAN; BEING SURVEYED AND FURTHER DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE EAST AND WEST 1/4 LINE, OF SECTION 5, T2N, R1W, AND THE EASTERLY RIGHT OF WAY LINE OF U.S. 127 AS FENCED AND OCCUPIED SAID POINT BEING NORTH 89°28'08" EAST PER STATE PLANE COORDINATES, NORTH AMERICAN DATUM OF 1983 (PREVIOUSLY RECORDED IN WARRANTY DEED LIBER 3094, PAGE 123 AS BEING SOUTH 89°25'40" EAST) 67.91 FEET FROM THE WEST 1/4 CORNER, SECTION 5, T2N, R1W, VEVAY TOWNSHIP, INGHAM COUNTY, MICHIGAN; THENCE NORTH 89°28'08" EAST (RECORDED AS SOUTH 89°25'40" EAST) 502.80 FEET ALONG THE EAST AND WEST 1/4 LINE OF SAID SECTION 5; THENCE NORTH 36°01'02" EAST (RECORDED AS NORTH 37°07'14" EAST) 376.30 FEET TO THE SOUTHERLY RIGHT OF WAY LINE OF M-36, CEDAR STREET AS DEFINED IN SURVEY RECORDED IN BOOK 9, PAGE 739; THENCE NORTH 54°04'07" WEST 321.56 FEET (RECORDED AS NORTH 53°27'42" WEST 320.98 FEET) TO THE SOUTHEASTERLY LINE OF PARCEL AS PREVIOUSLY SURVEYED AND RECORDED IN LIBER 4, PAGE 1267, INGHAM COUNTY RECORDS; THENCE ALONG SAID PARCEL THE FOLLOWING THREE COURSES: SOUTH 36°01'39" WEST 157.00 FEET (RECORDED AS SOUTH 36°32'18" WEST 150 FEET); THENCE NORTH 53°58'21" WEST (RECORDED AS NORTH 53°27'42" WEST) 200.00 FEET; THENCE NORTH 36°01'39" EAST 157.00 FEET (RECORDED AS NORTH 36°32'19" EAST 150 FEET); THENCE SOUTH 68°43'50" WEST 235.89 FEET ADJACENT TO THE FENCED AND OCCUPIED RIGHT OF WAY FOR NORTHBOUND EXIT RAMP TO M-36, CEDAR STREET (RECORDED AS SOUTH 68°47'58" WEST 234.9 FEET IN WARRANTY DEED LIBER 3094, PAGE 123 FOR THIS SUBJECT PARCEL); THENCE SOUTHERLY ALONG THE EAST LINE OF TRUNKLINE US-127 RIGHT OF WAY AS PREVIOUSLY DEFINED IN DETERMINATION OF NECESSITY OF RIGHT OF WAY DOCUMENT LIBER 892, PAGES 432 AND 433, INGHAM COUNTY RECORDS, THE FOLLOWING TWO COURSES: SOUTH 13°44'04" WEST (RECORDED AS SOUTH 13°24'58" WEST) 285.85 FEET; THENCE SOUTH 03°14'04"W 252.51 FEET (RECORDED AS SOUTH 02°54'58" WEST 248.55 FEET) TO POINT OF BEGINNING ON NORTHWEST 1/4 OF SECTION 5, TOGETHER WITH A PERPETUAL ACCESS EASEMENT AS DEFINED IN DEED LIBER 915, PAGE 266 AND 267, BEING A 75 FOOT EASEMENT OVER THE SOUTHEASTERLY 75 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE:

BEGINNING IN THE CENTERLINE OF NOW EXISTING CEDAR STREET (M-36) AT A POINT LOCATED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SECTION 5, T2N, R1W, CITY OF MASON, INGHAM COUNTY, MICHIGAN, THENCE EAST ON THE NORTH LINE OF SECTION 5, 621.5 FEET TO THE INTERSECTION OF CENTERLINE OF HOWELL ROAD AND KERNS STREET, THENCE SOUTH IN THE CENTERLINE OF KERNS STREET SOUTH 0° 23'42" WEST: 2117.77 FEET TO THE CENTERLINE OF CEDAR STREET, THENCE NORTH 53° 27'42" WEST 67.85 FEET FOR SAID POINT OF BEGINNING, THENCE SOUTH 36° 32'18" WEST 200.00 FEET, THENCE NORTH 53° 27'42" WEST 200.0 FEET, THENCE NORTH 36° 32'18" EAST 200.0 FEET TO THE CENTER OF CEDAR STREET. THENCE SOUTH 53° 27'42" EAST 200.0 FEET TO BEGINNING.

I hereby certify that I have surveyed and mapped the parcel of land shown in accordance with Act 132, P.A. 1970, as amended. And that the error in the relative positional precision of points established does not exceed 1 part in 10,000. See attached table for relative positional precision for each corner. I certify the map closure of bearings and distances around the perimeter of the property has been calculated to be 1 part in 453,800. This survey is within limits accepted by the practice of professional surveying. I further certify that there are no visible encroachments upon the subject parcel unless noted on the map.

CORNER	RELATIVE POSITIONAL PRECISION	DESCRIPTION OF POINT
A	0.016'	FND 1/2" IRON & UNREADABLE CAP
B	0.011'	SET 1/2" IRON/CAP#47997
C	0.010'	SET 1/2" IRON/CAP#47997
D	0.012'	SET 1/2" IRON/CAP#47997
E	0.010'	SET 1/2" IRON/CAP#47997
F	0.017'	FND 1/2" IRON
G	0.013'	SET 1/2" IRON/CAP#47997
H	0.011'	SET 1/2" IRON/CAP#47997
I	0.010'	SET 1/2" IRON/CAP#47997



CURT R MERROW
Professional Surveyor No. 47997
DATE: 2019/03/28



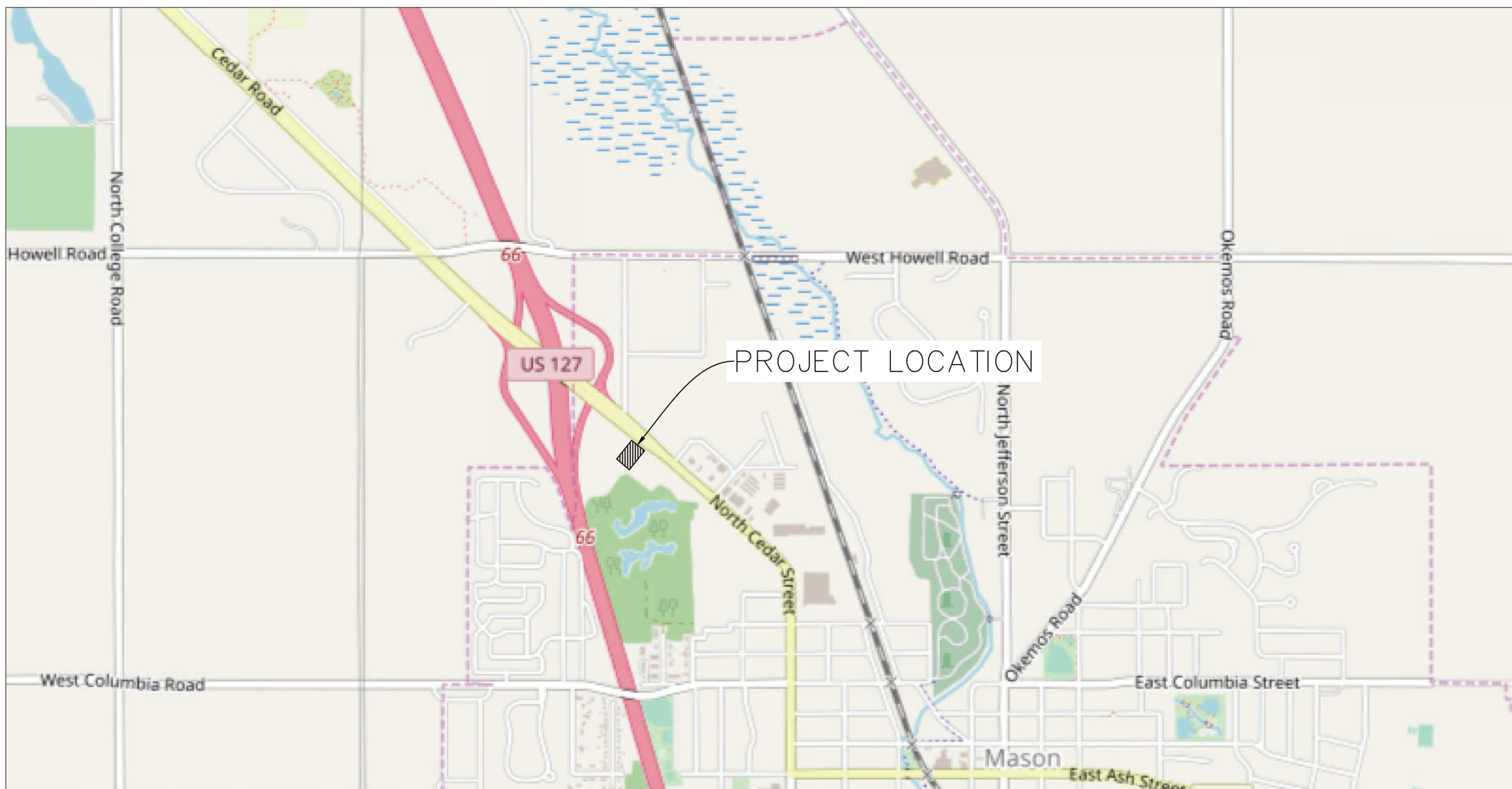
1210 N. CEDAR St., Suite B
LANSING, Michigan 48906
PHONE: (517) 853-7866
FAX: (517)-853-7869

BOUNDARY SURVEY

SURVEYED FOR:
WESTSIDE BUILDING CO.
913 LAURELWOOD DR
LANSING, MI 48917

FIELD:	CRM	COMP:	CRM
DRWG:	RWL	CHKD:	CRM
FILE	WESTSTIDE: CITY LIMITS		
SHEET	4	OF 4	SHEET(S)

CITY LIMITS
801 CEDAR STREET
SECTION 5, TOWN 2N, RANGE 1W
CITY OF MASON, INGHAM COUNTY, MICHIGAN



SITE LOCATION
NO SCALE

PROPOSED DEVELOPMENT:

A 4,500 BUILDING ADDITION TO FRONT AND
ADDITIONAL PARKING IN NORTH EAST PORTION
OF PARCEL.

PROPERTY DATA:

LAND AREA: 6.94 ACRES

TAX ID NUMBER: 33-19-10-05-153-006

ZONING:

EXISTING PARCEL ZONING: C2
PROPOSED PARCEL ZONING: C2

BUILDING REQUIREMENTS:

FRONT SETBACK = 50'
SIDE SETBACK = 10'
SIDE SETBACK = 10'
REAR SETBACK = 10'
MAXIMUM BUILDING HEIGHT = 45'

BUILDING SETBACKS PROVIDED

FRONT SETBACK = 120'
WEST SIDE SETBACK = 47'
EAST SIDE SETBACK = 88'
REAR SETBACK = 91'

MINIMUM LOT WIDTH = 100'
PROVIDED LOT WIDTH = 326'

MAXIMUM PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 50%
EXISTING PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 11.05%
PROPOSED PERCENT OF LOT COVERAGE BY ALL STRUCTURES = 12.77%

LEGAL DESCRIPTION:

A PARCEL OF LAND BEING PART OF THE NORTHWEST 1/4 OF SECTION 5, TOWNSHIP 2 NORTH, RANGE 1 WEST, VEYAY TOWNSHIP, NOW CITY OF MASON, INGHAM COUNTY, MICHIGAN; BEING SURVEYED AND FURTHER DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE EAST AND WEST 1/4 LINE, OF SECTION 5, T2N, R1W, AND THE EASTERLY RIGHT OF WAY LINE OF U.S. 127 AS FENCED AND OCCUPIED SAID POINT BEING NORTH 89°28'08" EAST PER STATE PLANE COORDINATES, NORTH AMERICAN DATUM OF 1983 (PREVIOUSLY RECORDED IN WARRANTY DEED LIBER 3094, PAGE 123 AS BEING SOUTH 89°25'40" EAST) 67.91 FEET FROM THE WEST 1/4 CORNER, SECTION 5, T2N, R1W, VEYAY TOWNSHIP, INGHAM COUNTY, MICHIGAN; THENCE NORTH 89°28'08" EAST (RECORDED AS SOUTH 89°25'40" EAST) 502.80 FEET ALONG THE EAST AND WEST 1/4 LINE OF SAID SECTION 5; THENCE NORTH 36°01'02" EAST (RECORDED AS NORTH 37°07'14" EAST) 376.30 FEET TO THE SOUTHERLY RIGHT OF WAY LINE OF M-36, CEDAR STREET AS DEFINED IN SURVEY RECORDED IN BOOK 9, PAGE 739; THENCE NORTH 54°04'01" WEST 321.56 FEET (RECORDED AS NORTH 53°27'42" WEST 320.98 FEET) TO THE SOUTHEASTERLY LINE OF PARCEL AS PREVIOUSLY SURVEYED AND RECORDED IN LIBER 4, PAGE 1267, INGHAM COUNTY RECORDS; THENCE ALONG SAID PARCEL THE FOLLOWING THREE COURSES: SOUTH 36°01'39" WEST 157.00 FEET (RECORDED AS SOUTH 36°32'18" WEST 150 FEET); THENCE NORTH 53°58'21" WEST (RECORDED AS NORTH 53°27'42" WEST) 200.00 FEET; THENCE NORTH 36°01'39" EAST 157.00 FEET (RECORDED AS NORTH 36°32'19" EAST 150 FEET); THENCE SOUTH 68°43'50" WEST 235.89 FEET ADJACENT TO THE FENCED AND OCCUPIED RIGHT OF WAY FOR NORTHBOUND EXIT RAMP TO M-36, CEDAR STREET (RECORDED AS SOUTH 68°47'58" WEST 234.9 FEET IN WARRANTY DEED LIBER 3094, PAGE 123 FOR THIS SUBJECT PARCEL); THENCE SOUTHERLY ALONG THE EAST LINE OF TRUNKLINE US-127 RIGHT OF WAY AS PREVIOUSLY DEFINED IN DETERMINATION OF NECESSITY OF RIGHT OF WAY DOCUMENT LIBER 892, PAGES 432 AND 433, INGHAM COUNTY RECORDS, THE FOLLOWING TWO COURSES: SOUTH 13°44'04" WEST (RECORDED AS SOUTH 13°24'58" WEST) 285.85 FEET; THENCE SOUTH 03°14'04" WEST 252.51 FEET (RECORDED AS SOUTH 02°54'58" WEST 248.55 FEET) TO POINT OF BEGINNING ON NORTHWEST 1/4 OF SECTION 5, TOGETHER WITH A PERPETUAL ACCESS EASEMENT AS DEFINED IN DEED LIBER 915, PAGE 266 AND 267, BEING A 75 FOOT EASEMENT OVER THE SOUTHEASTERLY 75 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE:

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I HEREBY CERTIFY THAT THESE PLANS HAVE BEEN
PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE
WITH ACT 240, PA OF 1937 AS AMENDED.



Kurt R. Krohulik
LICENSE NO. 046794
DC ENGINEERING
1210 N. CEDAR ST., SUITE B
LANSING, MI 48906
(517) 853-7866

3/29/2019
DATE

OWNER	LEISURE TYME LLC 801 N. CEDAR MASON, MI 48854
ARCHITECT	PAUL D. BARBOUR AND ASSOCIATES 9617 COLUMBIA HWY. EATON RAPIDS, MI 48827 (517) 663-0088
ENGINEER	DC ENGINEERING PC 1210 NORTH CEDAR ST., SUITE B LANSING, MICHIGAN 48906 (517) 853-7866
CONTRACTOR	WESTSIDE BUILDING COMPANY 3310 BARDAVILLE DRIVE, SUITE 3 LANSING, MI 48906 (517) 749-3898

LEGEND

SYMBOLS

- ABANDONED MANHOLE
- PR/EX COMBINED MANHOLE
- PR/EX STORM MANHOLE/CATCHBASIN
- PR/EX STORM CATCH BASIN (CURB)
- PR/EX FLARED END SECTION
- PR/EX STORM DOWNSPOUT
- PR/EX SANITARY MANHOLE
- PR/EX SANITARY CLEANOUT
- PR/EX WATER MANHOLE
- PR/EX WATER VALVE
- PR/EX WATER CURB STOP
- PR/EX WATER SPRINKLER
- PR/EX MONITORING WELL
- PR/EX FIRE HYDRANT
- PR/EX UTILITY RISER
- PR/EX COMMUNICATIONS MANHOLE
- PR/EX GAS VALVE
- PR/EX GAS METER
- PR/EX ELECTRIC MANHOLE
- PR/EX ELECTRIC POWER POLE
- PR/EX ELECTRIC POWER POLE GUY WIRE
- PR/EX ELECTRIC TRANSFORMER
- UTILITY HANDHOLE
- PR/EX LIGHT POLE
- PR/EX POWER POLE WITH LIGHT FIXTURE
- PR/EX FLOOD LIGHT
- PR/EX DECIDUOUS TREE
- PR/EX CONIFEROUS TREE
- STUMP
- PR/EX PARKING METER
- PR/EX MAILBOX
- PR/EX AC UNIT
- PR/EX SIGN
- PR/EX FLAG POLE
- PR/EX BENCH
- PR/EX BIKE RACK
- PR/EX PARKING SPACE COUNT
- PR/EX CONC BALLARD
- TRAFFIC LIGHT
- ITEM TO BE REMOVED
- FOUND MONUMENTATION
- SET CAPPED IRON ROD #
- SECTION CORNER
- SOIL BORING
- BENCHMARK
- SOIL XXXX
- SOIL CLASSIFICATION (NCRS)
- SURFACE DRAINAGE PATH DIRECTION

ABBREVIATIONS

- BC BACK OF CURB
- BIT BITUMINOUS
- BLD BUILDING
- BLK BULKHEAD
- BB BOTTOM OF BANK
- C CALCULATED
- CL CENTERLINE
- CB CATCH BASIN
- CO CLEAN OUT
- CMB COMBINED
- CONC CONCRETE
- ELEC ELECTRIC
- EL ELEVATION
- ENC ENCROACHMENT
- EOM EDGE OF METAL
- EX EXISTING
- FC FACE OF CURB
- FS FINISH SURFACE
- FES FLARED END SECTION
- FL FLOW LINE
- FOIR FOUND CAPPED IRON ROD
- GAS GAS LINE
- LF LINEAR FEET
- LS LANDSCAPE
- MH MANHOLE
- (M) MEASURED
- MON MONUMENT
- NO NUMBER
- OC ON CENTER
- OS OFFSET
- PL PROPERTY LINE
- PR PROPOSED
- (R) RECORDED
- POB POINT OF BEGINNING
- POL POINT ON LINE
- R.O.W. RIGHT-OF-WAY
- SAN SANITARY
- SF SQUARE FEET
- STM STORM
- TB TOP OF BANK
- TC TOP OF CURB
- TR TOP OF RETAINING WALL
- TW TOP OF WALK
- TYP TYPICAL
- WTR WATER

LINE TYPES

- PR/EX CURB AND GUTTER
- PR/EX MAJOR CONTOUR
- PR/EX MINOR CONTOUR
- PR/EX STORM SEWER
- PR/EX SANITARY SEWER
- PR/EX UNDERGROUND ELECTRIC LINE
- PR/EX OVERHEAD ELECTRIC LINE
- PR/EX GAS LINE
- PR/EX WATER LINE
- PR/EX COMMUNICATION LINE
- PR/EX STEAM LINE
- PR/EX TREE LINE
- PR/EX FENCE
- RIGHT-OF-WAY
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- HISTORICAL PROPERTY LINE
- EASEMENT
- SETBACK
- SECTION LINE
- SILT FENCE
- DISTURBANCE LIMITS
- RUNOFF AREA
- SOIL TYPE CONTOURS (NCRS)
- CURB REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE REMOVAL
- CONCRETE HATCHING
- BITUMINOUS PAVEMENT HATCHING
- STONE LANDSCAPE HATCHING
- MULCHED LANDSCAPE HATCHING

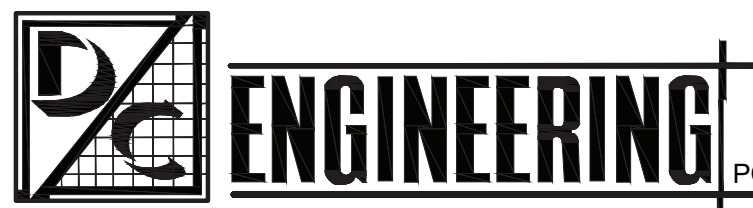
SHEET INDEX

- 1 CIVIL - COVER
- 2 CIVIL - OVERALL SITE PLAN
- 3 CIVIL - DEMOLITION
- 4 CIVIL - LAYOUT
- 5 CIVIL - GRADING & UTILITIES
- 6 CIVIL - DETAILS

CONTACTS:

PLANNING	ELIZABETH HUDE, DIRECTOR CITY OF MASON PLANNING DEPARTMENT 201 W. ASH ST MASON, MI 48854
TRANSPORTATION	MDOT LANSING TRANSPORTATION CENTER 2700 PORT LANSING RD LANSING, MI 48906 (517) 335-3754
GAS	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
ELECTRIC	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
WATER	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
SANITARY	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
STORM	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200

REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY



1210 N. CEDAR ST., SUITE B
LANSING, MICHIGAN 48906 PH:
(517) 853-7866

CITY LIMITS
CIVIL - COVER

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: NONE
DATE: 2019-01-10
DRAWN BY: EGS
REVIEWED BY: KRK
SHEET: 1 OF 6





LANDSCAPE SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	AMOUNT	SIZE
	CALAMAGROSTIS	'KARL FOERSTER' GRASS	6	10 GAL
	HYDRANGEA PANICULATA	'LIME LIGHT' HYDRANGEA TREE	1	10 GAL
	PINUS MUGO	MUGO PINE	14	10 GAL
	PYRUS CALLERYANA 'BRADFORD'	BRADFORD CALLERY PEAR	7	2.5" CAL.
	TILIA CORDATA 'GREENSPIRE'	LITTLE LEAF LINDEN	5	2.5" CAL.
	EX 3" PEAR		EX	
	EX 16" ELM		EX	

LANDSCAPING REQUIREMENTS:

INTERIOR PARKING LOT LANDSCAPE AREA
REQUIRED: 1 TREE AND 100 SFT OF LANDSCAPE/8 SPACES
TOTAL SPACES = 236
TREES REQUIRED = $236/8 = 29.5$ OR 30
LANDSCAPING REQUIRED = $(236/8) \times 100$ SFT = 29.5 X 100 SFT = 2,950 SFT

PROVIDED: 8,200 SF

FRONT (CEDAR STREET) BUFFER (326' AT 10' WIDE)
REQUIRED: 1 TREE EVERY 30 LF
 $316'/30' = 10.5 = 11$ TREES

PROVIDED: 3 (EX)
5 (PR)
8 TOTAL

SIDE (EAST PROPERTY LINE) BUFFER (370' AT 10' WIDE)
REQUIRED: 1 TREE EVERY 30 LF
 $370'/30' = 12.3 = 13$ TREES

PROVIDED: 1 (EX)
5 (PR)
6 TOTAL

REAR BUFFER (492' AT 10' WIDE)
REQUIRED: 1 TREE EVERY 30 LF
 $492'/30' = 16.4 = 17$ TREES

PROVIDED: NONE

SIDE (WEST PROPERTY LINE) BUFFER (770' AT 10' WIDE)
REQUIRED: 1 TREE EVERY 30 LF
 $770'/30' = 25.7 = 26$ TREES

PROVIDED: NONE

PARKING:

REQUIRED PARKING FOR ENTIRE SITE:

RESTAURANT = 1 SPACE/50 SF OF USEABLE FLOOR AREA = 55 SPACES
= 2,741 SF (EX)/50 SF (EX)

ARCADE = 1 SPACE/100 SF OF USEABLE FLOOR AREA = 5 SPACES
= 483 SF (EX)/100 SF = 31 SPACES
= 3,015 SF (PR)/100 SF

BOWLING ALLEY = 5 SPACES/1 BOWLING LANE = 120 SPACES
= 24 LANES (EX) X 5 SPACES

VOLLEY BALL COURT = 4 SPACES/1 COURT = 12 SPACES
= 3 COURTS (EX) X 4 SPACES = 223 SPACES

EX PARKING:
ADA = 4
STD = 240
TOTAL = 244

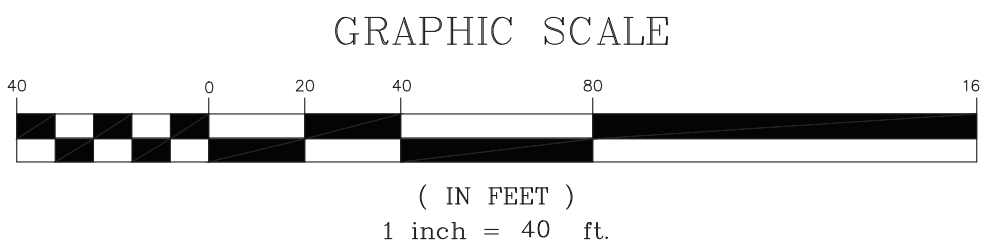
PR PARKING:
ADA = 7
STD = 235 [45 9'X18' SPACES (19.1%)/190 10'X20' SPACES (80.9%)]
TOTAL = 242

PARKING SPACE DIMENSIONS:

1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

LOADING ZONE:

1. DELIVERIES TO BE PERFORMED DAILY AT NON-PEAK PARKING USAGE



REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS
CIVIL - OVERALL SITE PLAN

WESTSIDE BUILDING COMPANY
3310 BARDVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 40' DRAWN BY: EGS REVIEWED BY: KRK
DATE: 2019-01-10 SHEET: 2 OF 6



WESTSIDE - CITY LIMITS

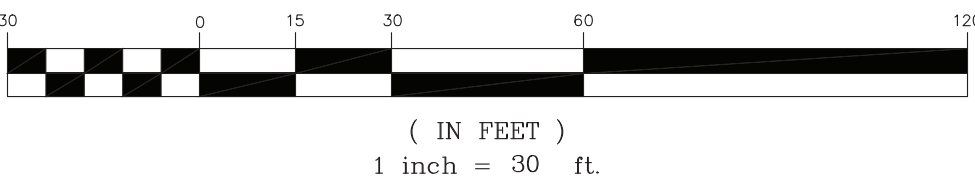
DEMOLITION NOTES

1. SAW CUT EXISTING EDGE OF PAVEMENT IMMEDIATELY PRIOR TO NEW PAVEMENT. DAMAGED EDGES SHALL BE RE-CUT PRIOR TO CONSTRUCTION OF NEW PAVEMENT.
2. CURB AND GUTTER TO BE REMOVED TO NEXT JOINT.
3. CONTRACTOR RESPONSIBLE FOR DISPOSAL OF ALL MATERIALS REMOVED FROM SITE.
4. BURNING IS NOT APPROVED

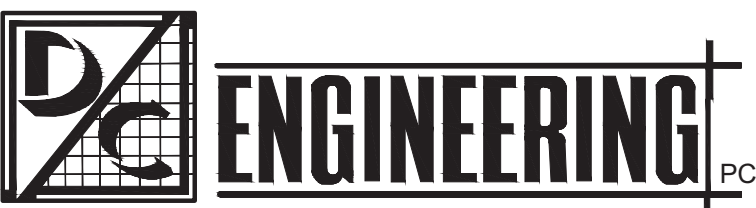
SUPPLEMENTAL LEGEND:

- DEMO LIMITS
- CURB REMOVAL
- CONCRETE REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- ITEM TO BE REMOVED

GRAPHIC SCALE



REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS

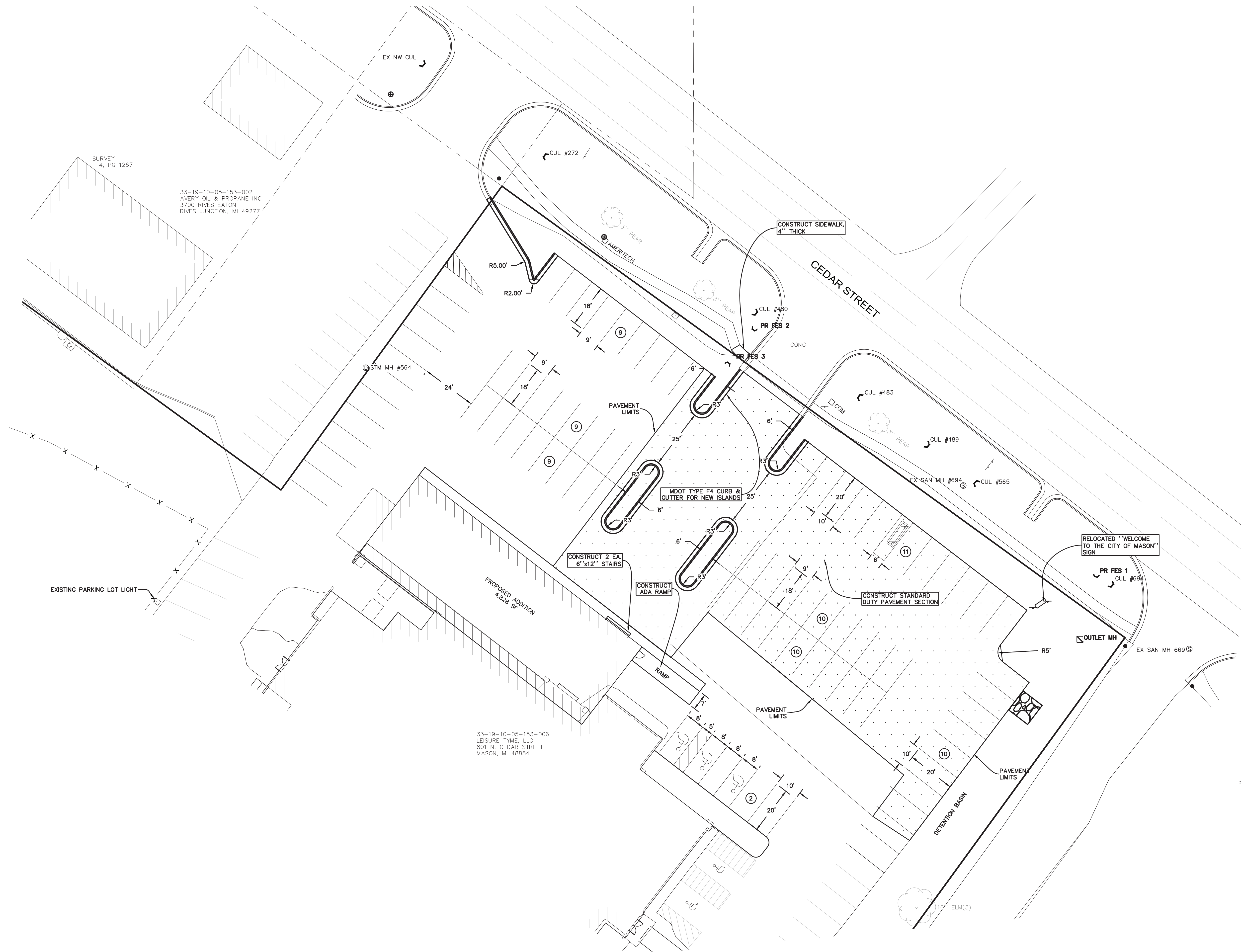
CIVIL - DEMOLITION

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20'
DATE: 2019-01-10
DRAWN BY: EGS
REVIEWED BY: KRK
SHEET: 3 OF 6



WESTSIDE - CITY LIMITS



LAYOUT NOTES:

- GENERAL NOTES:
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS.
 2. STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MASON STANDARDS. CONTRACTOR SHALL OBTAIN A CITY OF MASON SEWER PERMIT PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL OBTAIN A MDOT RIGHT OF WAY PERMIT PRIOR TO CONSTRUCTION WITHIN CEDAR STREET.
 4. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL PERMITS, INCLUDING FEES, PRIOR TO WORK.

- BITUMINOUS PAVEMENT
1. BITUMINOUS PAVEMENT SHALL BE MDOT MIXTURE 13A.
 2. AGGREGATE BASE SHALL BE MDOT 22A. AGGREGATE BASE SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
 3. SUBBASE SHALL BE MDOT TYPE II GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM DENSITY.
 4. PAVEMENTS SHALL BE CONSTRUCTED TO THE CROSS SECTION INDICATED IN THE PLANS.

- CONCRETE
1. ALL CONCRETE SHALL BE MDOT TYPE P1.
 2. PLACE 1/2" INCH EXPANSION JOINT AT ALL CONCRETE TO CONCRETE INTERFACE AND CONCRETE TO BUILDING INTERFACE.

- PARKING
1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

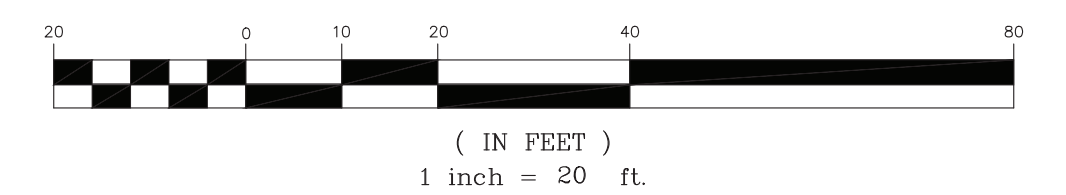
- PAVEMENT MARKINGS
1. PARKING LOT STRIPPING SHALL BE TWO COATS MDOT REGULAR DRY PAINT PLACED NO EARLIER THAN 14 DAYS AFTER PAVING. STANDARD PARKING LOT SPACES SHALL BE WHITE. ADA PARKING SPACES SHALL BE BLUE.
 2. GORE STRIPPING SHALL BE AT A 45-DEGREE ANGLE TO THE PRIMARY LINE AND STRIPPED AT 34" CENTERS.

- RESTORATION
1. LAWN-AREAS SHALL BE PREPARED WITH 3" TOPSOIL SURFACE, SEEDED, MULCHED, AND FERTILIZED. PRIOR TO PLACING TOPSOIL THE UNDERLYING MATERIALS SHALL BE LOOSENED TO A DEPTH OF 4". SEED SHALL BE MDOT TYPE THM.

PARKING SPACE DIMENSIONS:

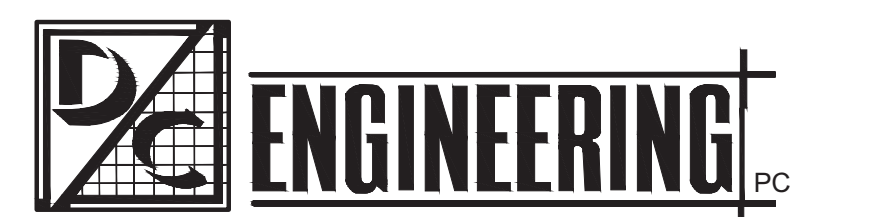
1. ALL PARKING SPACES ARE 10' X 20' EXCEPT AS SHOWN ON PLAN.

GRAPHIC SCALE



REVISIONS

2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS
CIVIL - LAYOUT

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 4 OF 6

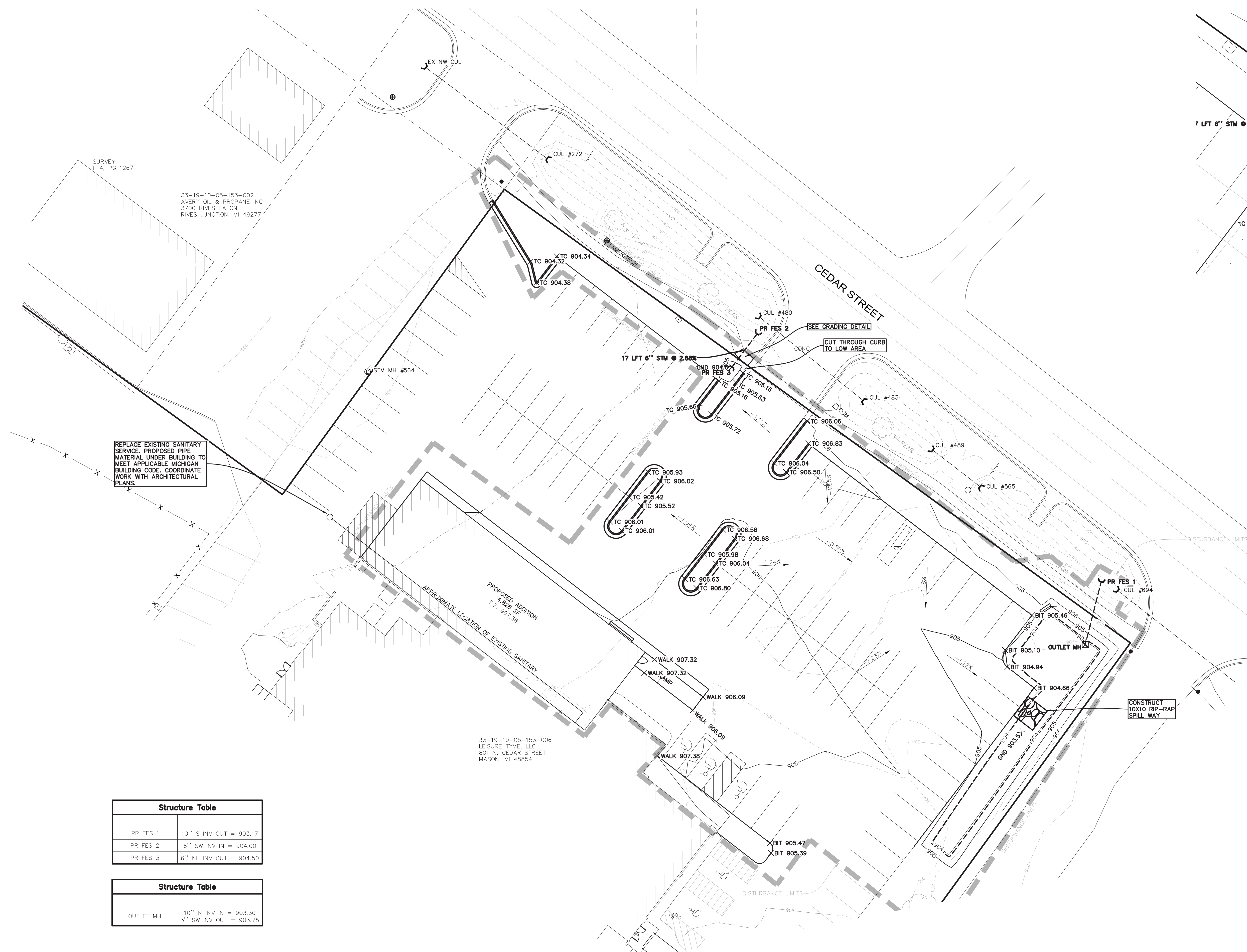


33-19-10-05-153-006
LEISURE TIME, LLC
801 N. CEDAR STREET
MASON, MI 48854

33-19-10-05-153-002
AVERY OIL & PROPANE INC
3700 RIVES EATON
RIVES JUNCTION, MI 49277

SURVEY
L 4, PG 1267

WESTSIDE - CITY LIMITS

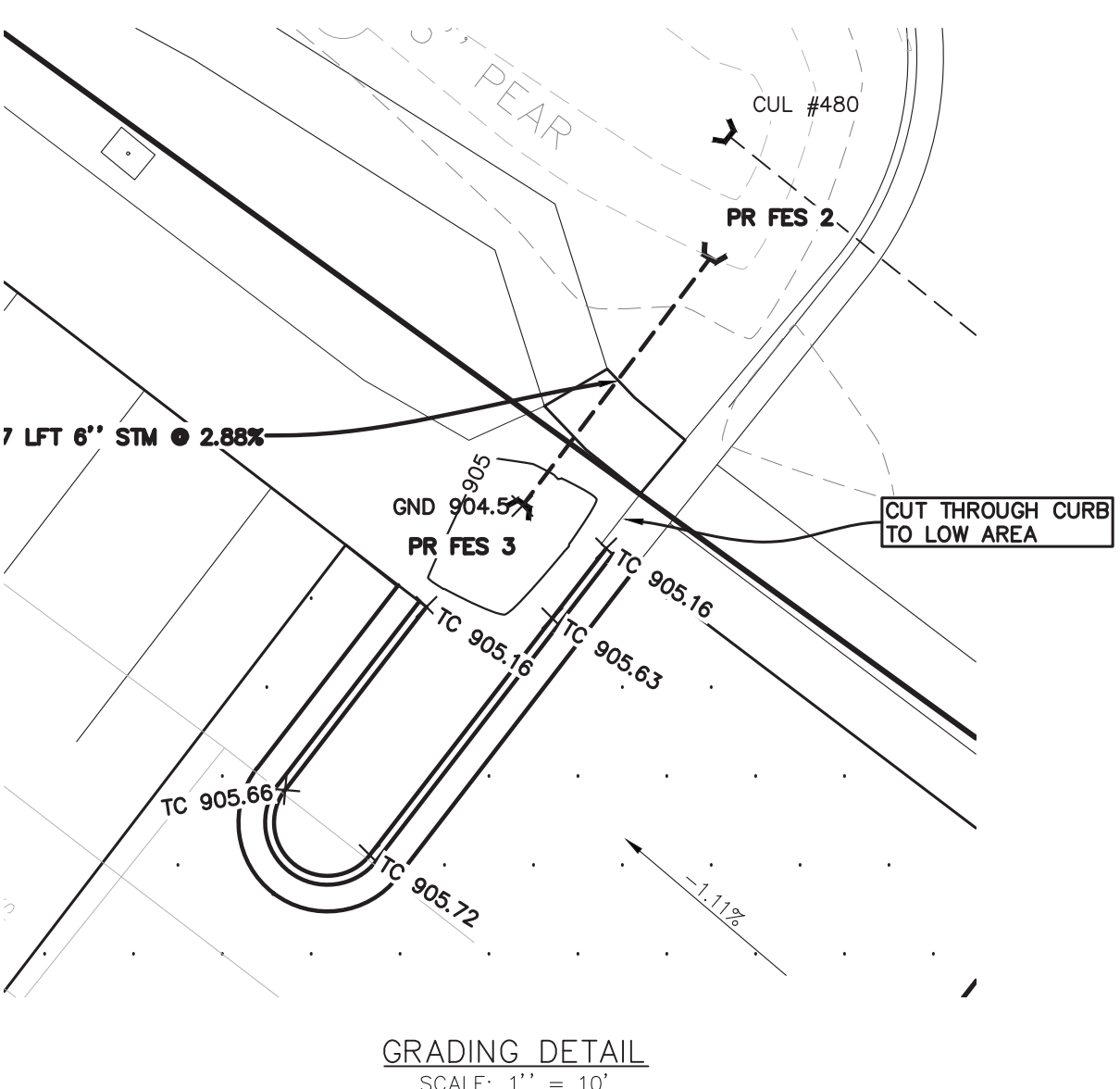


REPLACE EXISTING SANITARY SERVICE. PROPOSED PIPE MATERIAL UNDER BUILDING TO MEET APPLICABLE MICHIGAN BUILDING CODE. COORDINATE WORK WITH ARCHITECTURAL PLANS.

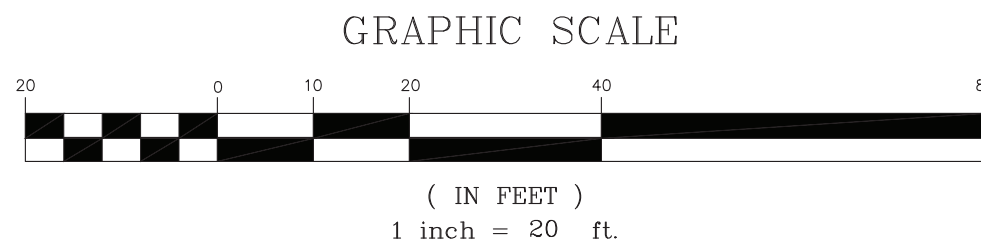
Structure Table	
PR FES 1	10" S INV OUT = 903.17
PR FES 2	6" SW INV IN = 904.00
PR FES 3	6" NE INV OUT = 904.50

Structure Table	
OUTLET MH	10" N INV IN = 903.30 3" SW INV OUT = 903.75

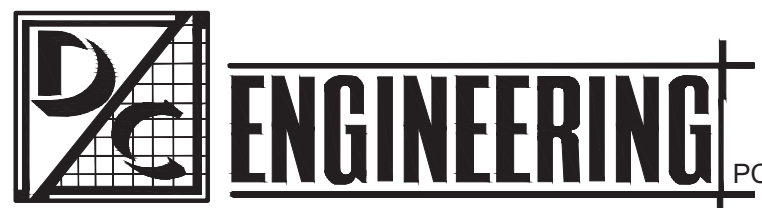
33-19-10-05-153-006
LEISURE TIME, LLC
801 N. CEDAR STREET
MASON, MI 48854



GRADING DETAIL
SCALE: 1" = 10'



REVISIONS
2019-03-05 CITY COMMENTS
2019-03-29 REVISED BOUNDARY



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LANSING, MICHIGAN 48906
PH: (517) 853-7866

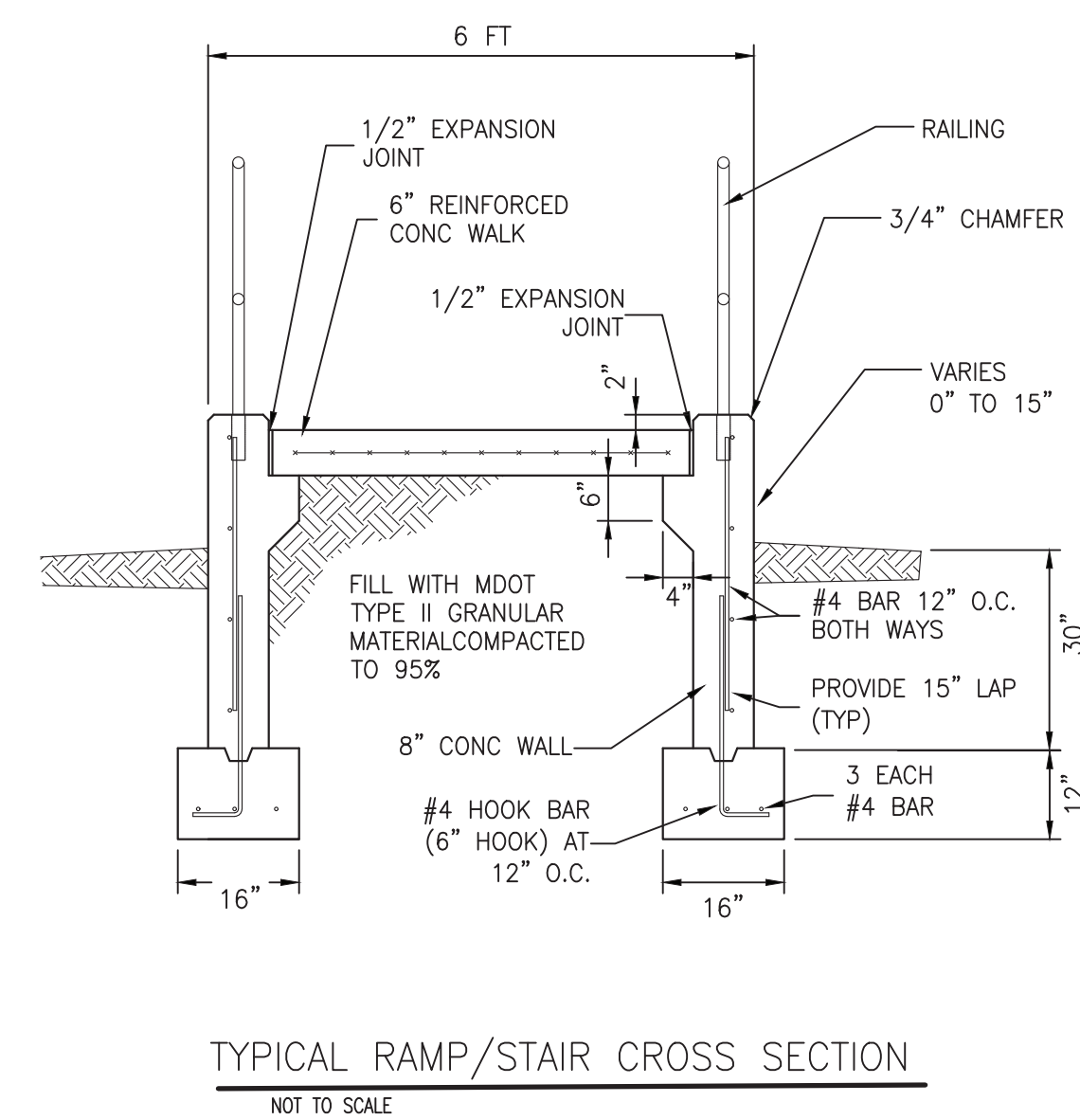
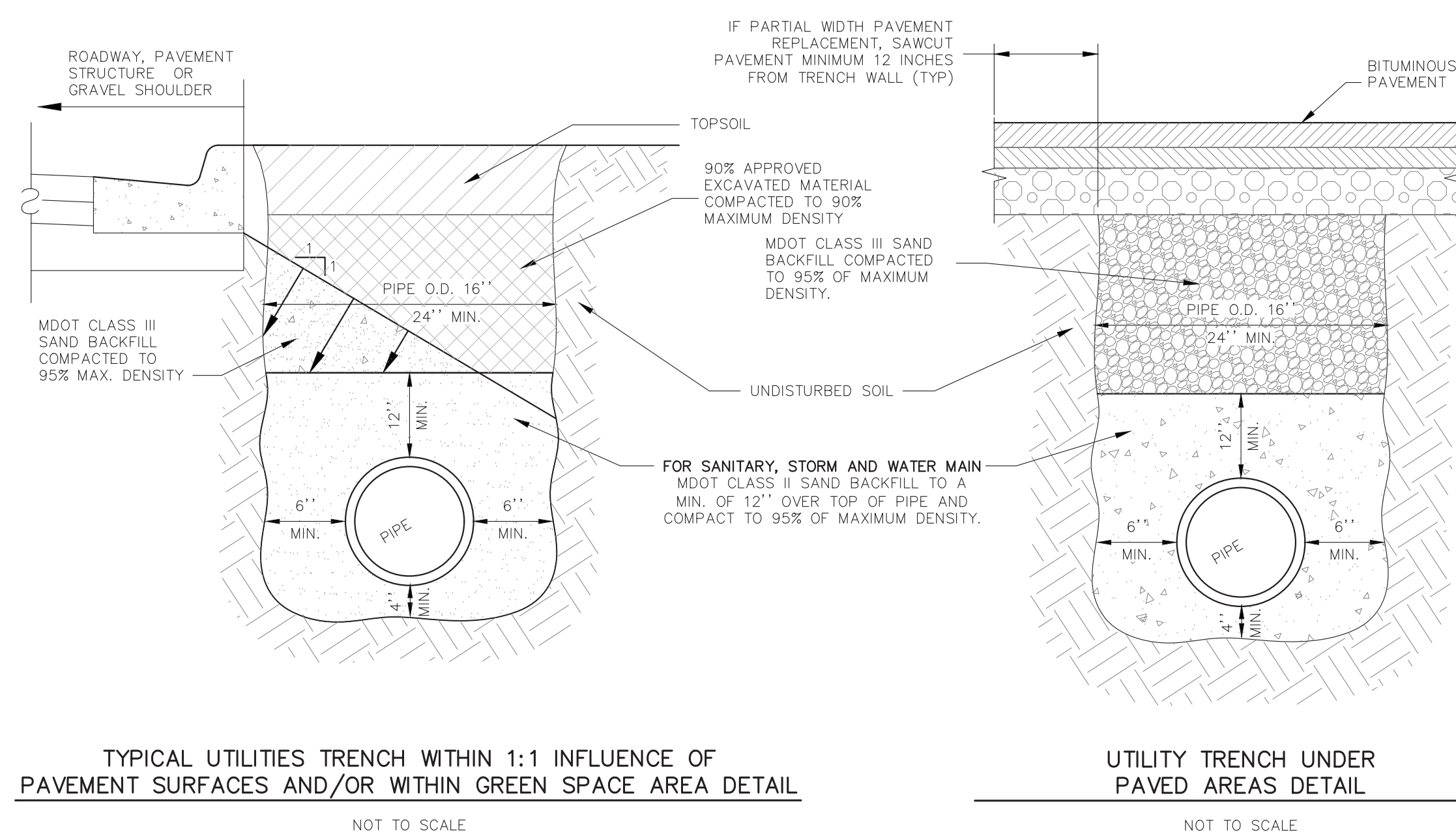
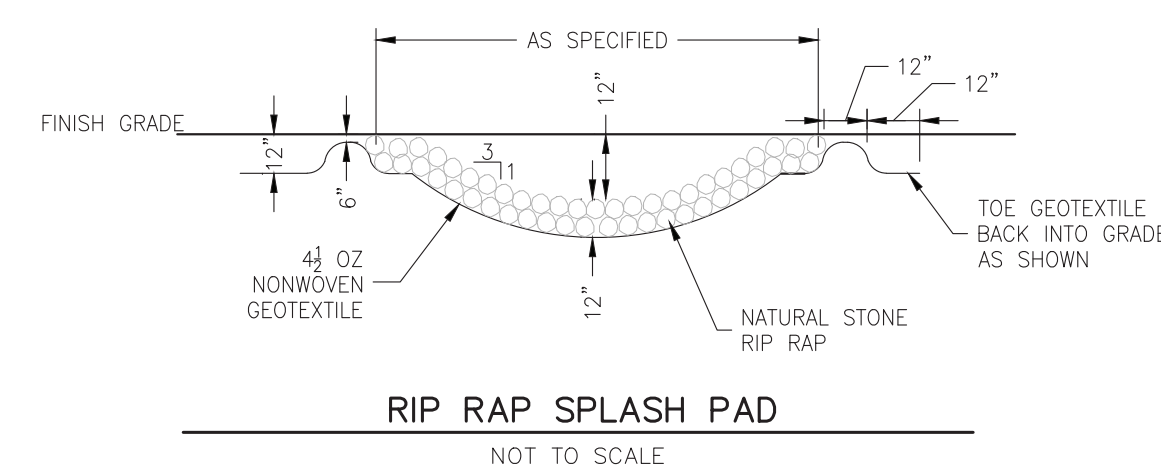
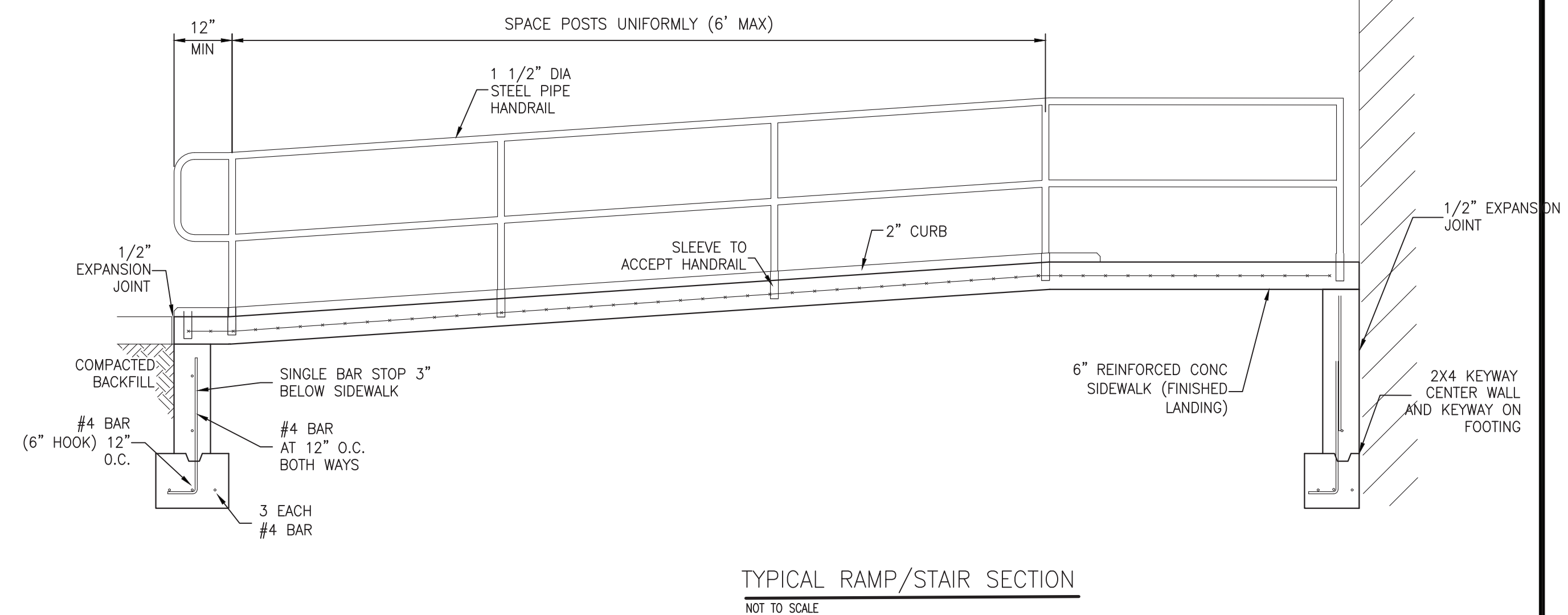
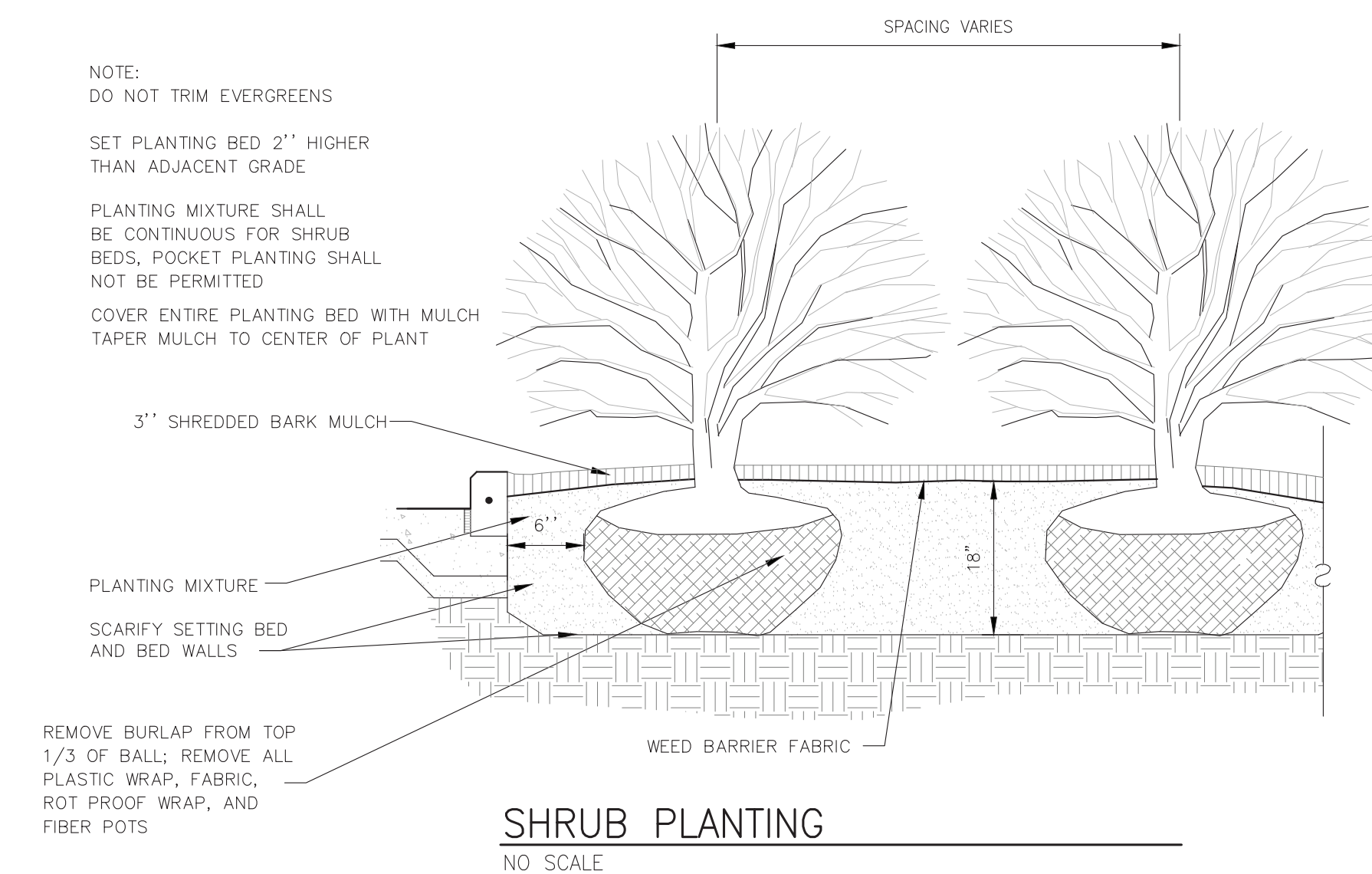
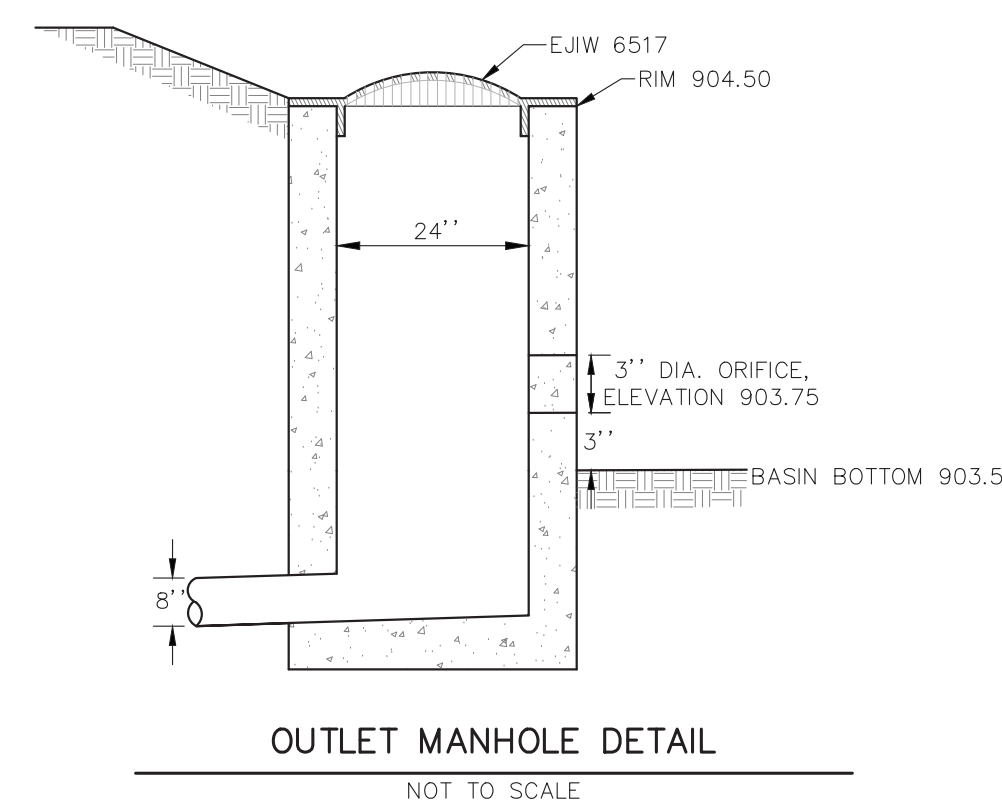
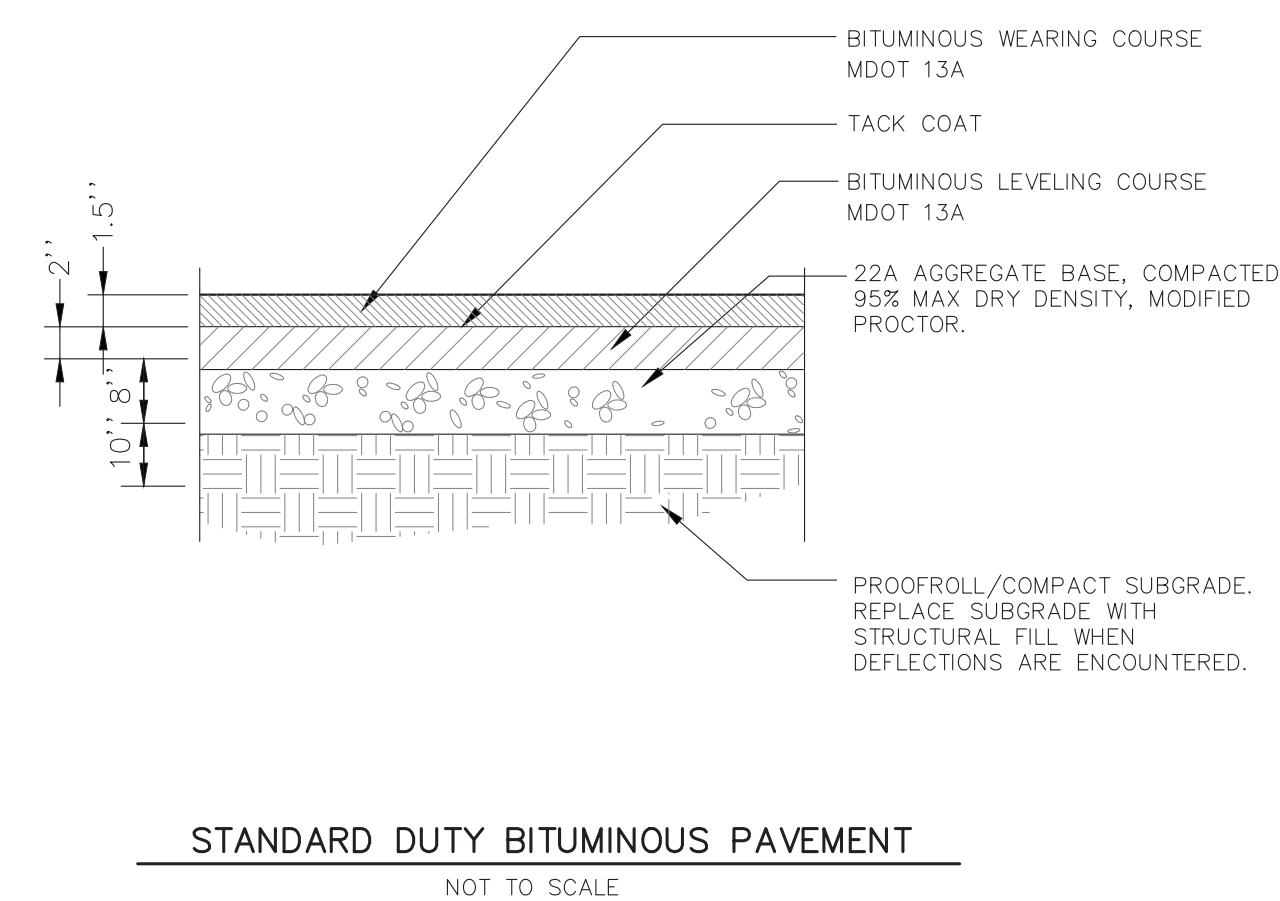
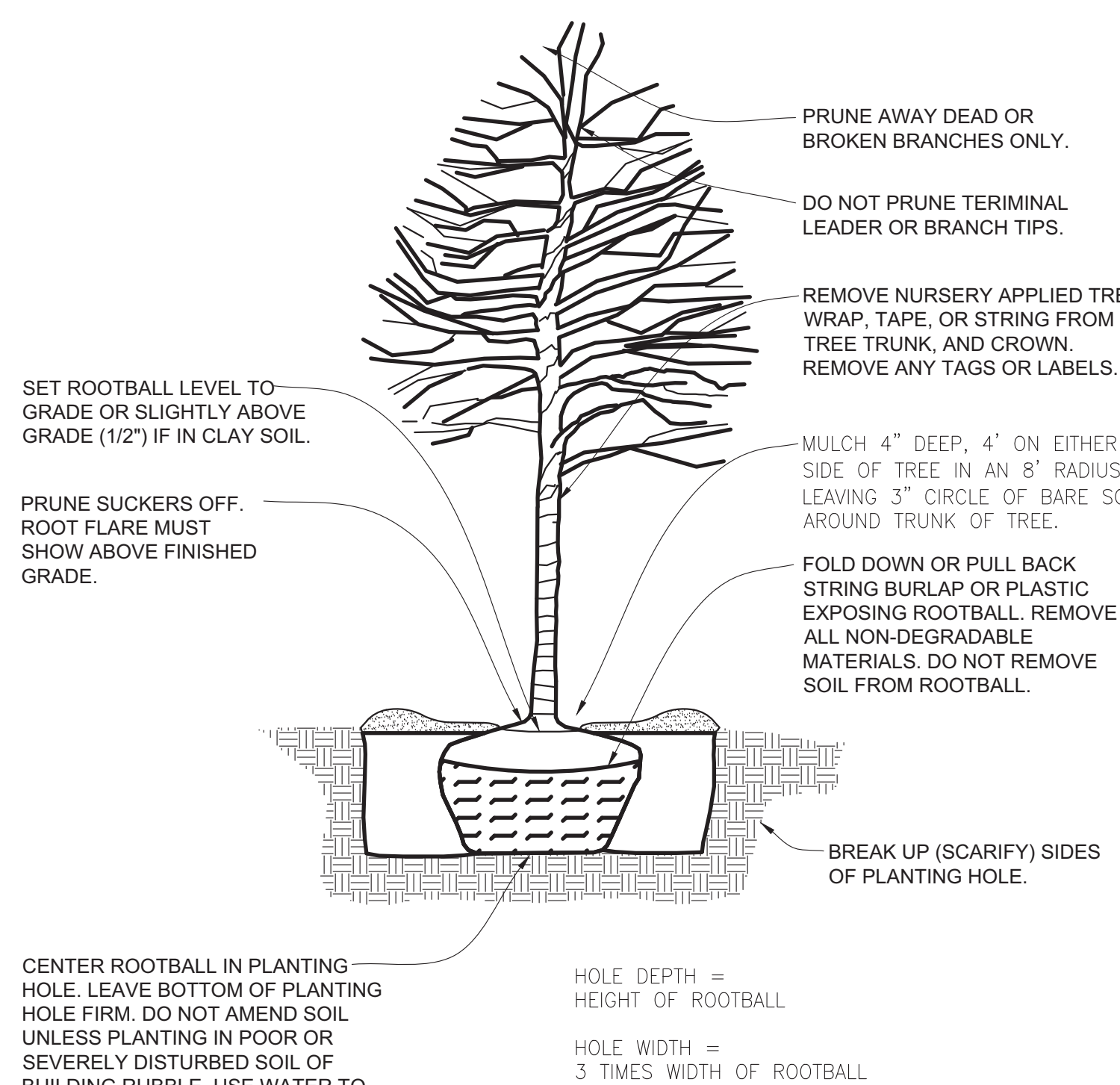
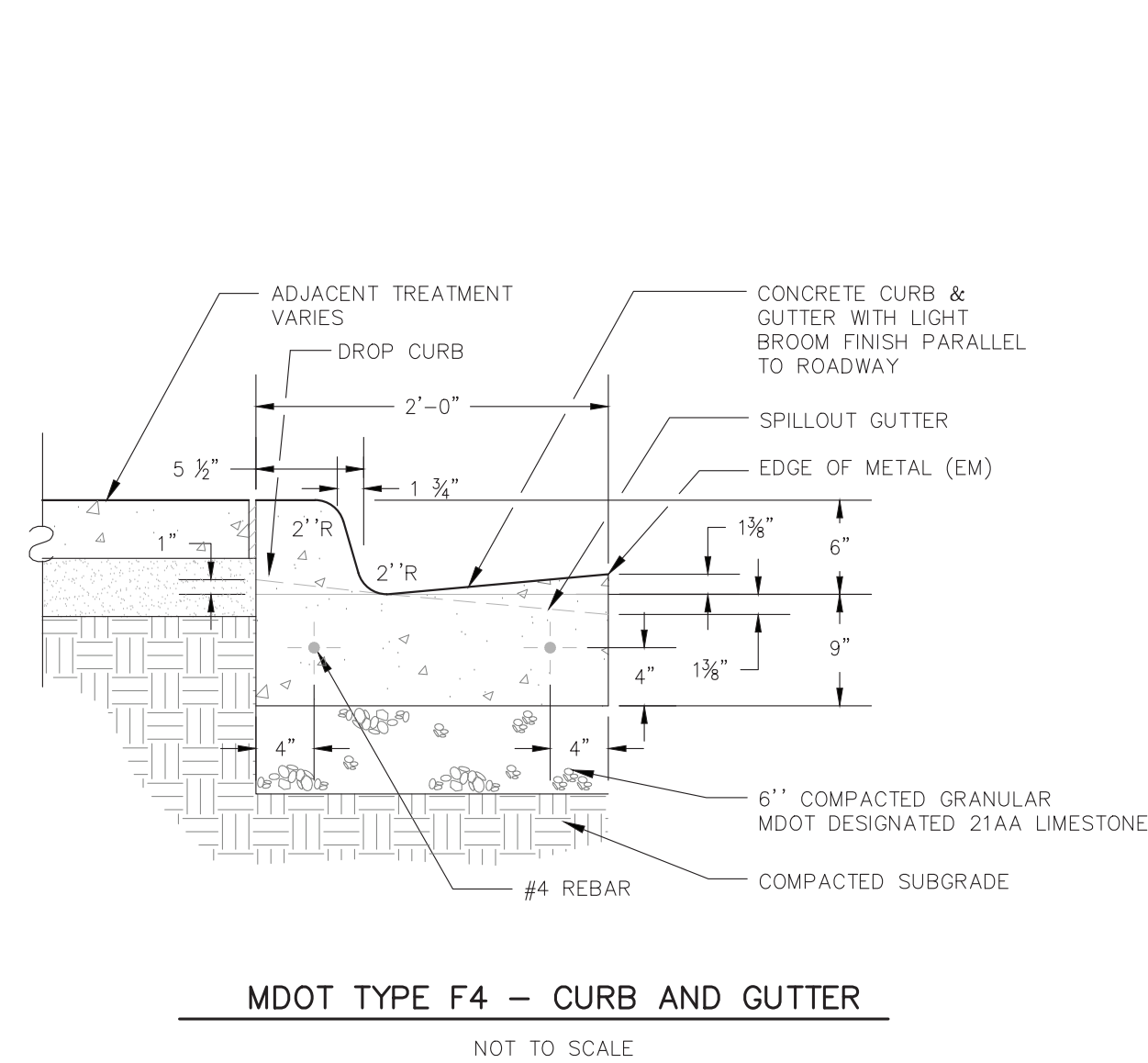
CITY LIMITS
CIVIL - GRADING + UTILITIES

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY
3310 BARDAVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

SCALE: 1" = 20'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-01-10		SHEET: 5 OF 6



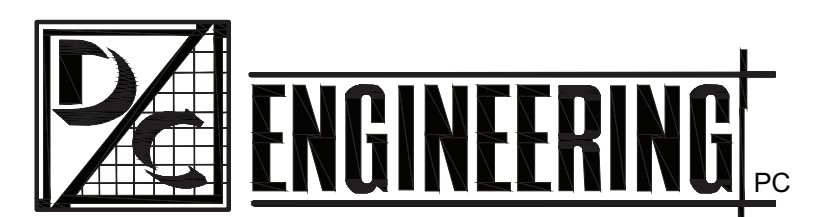
WESTSIDE - CITY LIMITS



NOTES:

1. PLACE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN EXISTING STRUCTURE AND NEW SIDEWALK, RAMPS, AND LANDINGS.
2. BROOM FINISH CONCRETE RAMPS
3. VERTICAL CONCRETE SURFACES, HAND RUB FINISH TO REMOVE ALL FORM MARKS. ALL AIR POCKETS AND FORM TIES SHALL BE GROUTED.

REVISIONS	
2019-03-05	CITY COMMENTS
2019-03-29	REVISED BOUNDARY



1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

CITY LIMITS

CITY LIMITS

CIVIL - DETAILS

PLANS PREPARED FOR:
WESTSIDE BUILDING COMPANY

WESTSIDE BUILDING COMPANY
3310 BARDVILLE DRIVE, SUITE 3
LANSING, MI 48906
(517) 749-3898

= 20'	DRAWN BY: EGS	REVIEWED BY:
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9-01-10		SI
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SCALE: 1" = 20'

DATE: 2019-01-10

DRAWN BY: EGS

0	
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WESTSIDE - CITY LIMITS

Westside Building Company
City Limits Development
Mason, Michigan
Stormwater Management Report



Prepared by: DC Engineering
January 2019

Introduction

The City Limits development is proposing to construction a building addition. This addition will remove existing parking spaced. To offset the loss of these spaces, additional parking lot will be constructed in the northeast corner of the parcel. The development site fronts Cedar Street (M36) and abuts the MDOT US127 Off Ramp on the north and eastern sides of the property. The existing site drains southwesterly by overland flow through the parking lot to an existing culvert at the southwest corner of the parking lot. This culvert conveys the runoff into the MDOT roadside ditch along the US127 Off Ramp. The front northeast corner of the site is currently vacant (lawn). Runoff from this area flows by overland flow in all directions. Flow is either conveyed onto the existing pavement which flows to the culvert at the southwest corner of the parking lot or flows directly into the roadside ditch along Cedar Street.

The proposed work consist of reduction of impervious area in the existing parking lot through construction of landscape islands, landscape beds, and removal of parking area along Cedar Street. Additional parking lot will be constructed in the currently vacant northeast corner of the site. The existing parking lot will continue to drain by overland flow to the culvert at the southwest corner of the parking lot. The new parking area will drain to a detention system on the south side of the new parking area. This basin will discharge flows into the roadside ditch along Cedar Street.

Stormwater Runoff Calculations

Stormwater runoff controls for the proposed additional impervious area need to be controlled to meeting the State of Michigan MS4 Phase II stormwater requirements and MDOT runoff requirements. The stormwater runoff was modeled utilizing the City of Lansing "Site Development Stormwater Tool". This spreadsheet compute the pre- and post-development runoff, including flow controls, utilizing the NRCS Curve Number approach. The spreadsheet computes a runoff hydrograph and routes the hydrograph through the flow control devices to compute the discharge rate and volume to meet the State of Michigan MS4 Phase II stormwater controls.

Two runoff models were performed to analyze the runoff from the site. First, the existing parking lot in the front of the existing building was modeled to determine the reduction in flow realized by the reduction in impervious area. This reduction in runoff is used to offset some of the runoff from the proposed parking lot addition.

The second runoff model analyzes the runoff from the proposed parking lot area. The model also analyzes the discharge controls from the basin.

Figure 1 provides a location map of the development site.

Figure 2 provides the existing conditions map.

Figure 3 provides the proposed conditions map.

Model 1 provides the computation of runoff reduction in the existing parking lot.

Model 2 provides the computation of runoff detention and discharge controls in the proposed detention basin.

Figure 4 provides the NRCS Websoil survey to determine the estimate infiltration capacity of the soils in the detention basin.

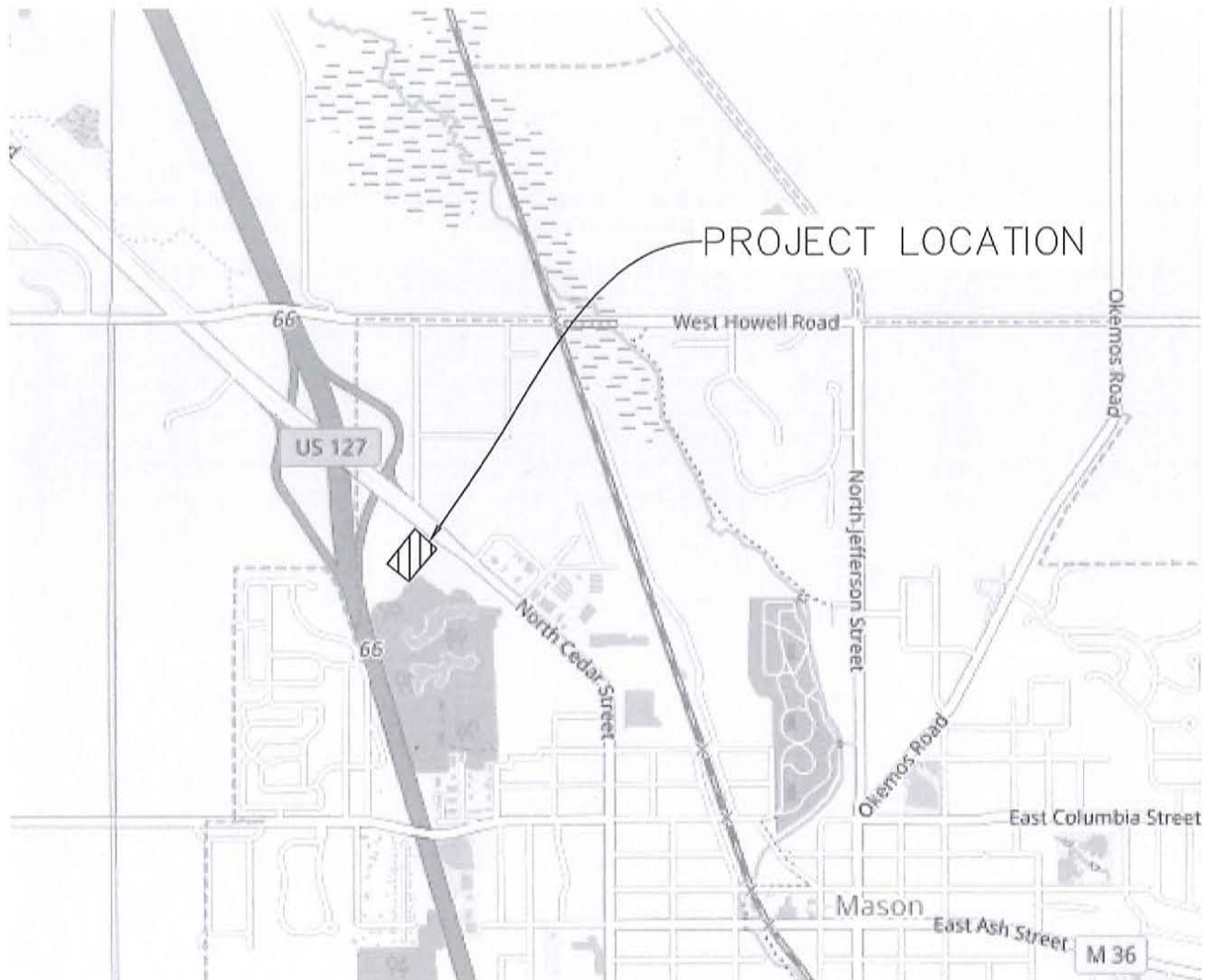
Figure 5 provides the NOAA Atlas 14 rainfall amounts utilized in the runoff models.

Figure 6 provides the stage-storage curve of the proposed detention basin.

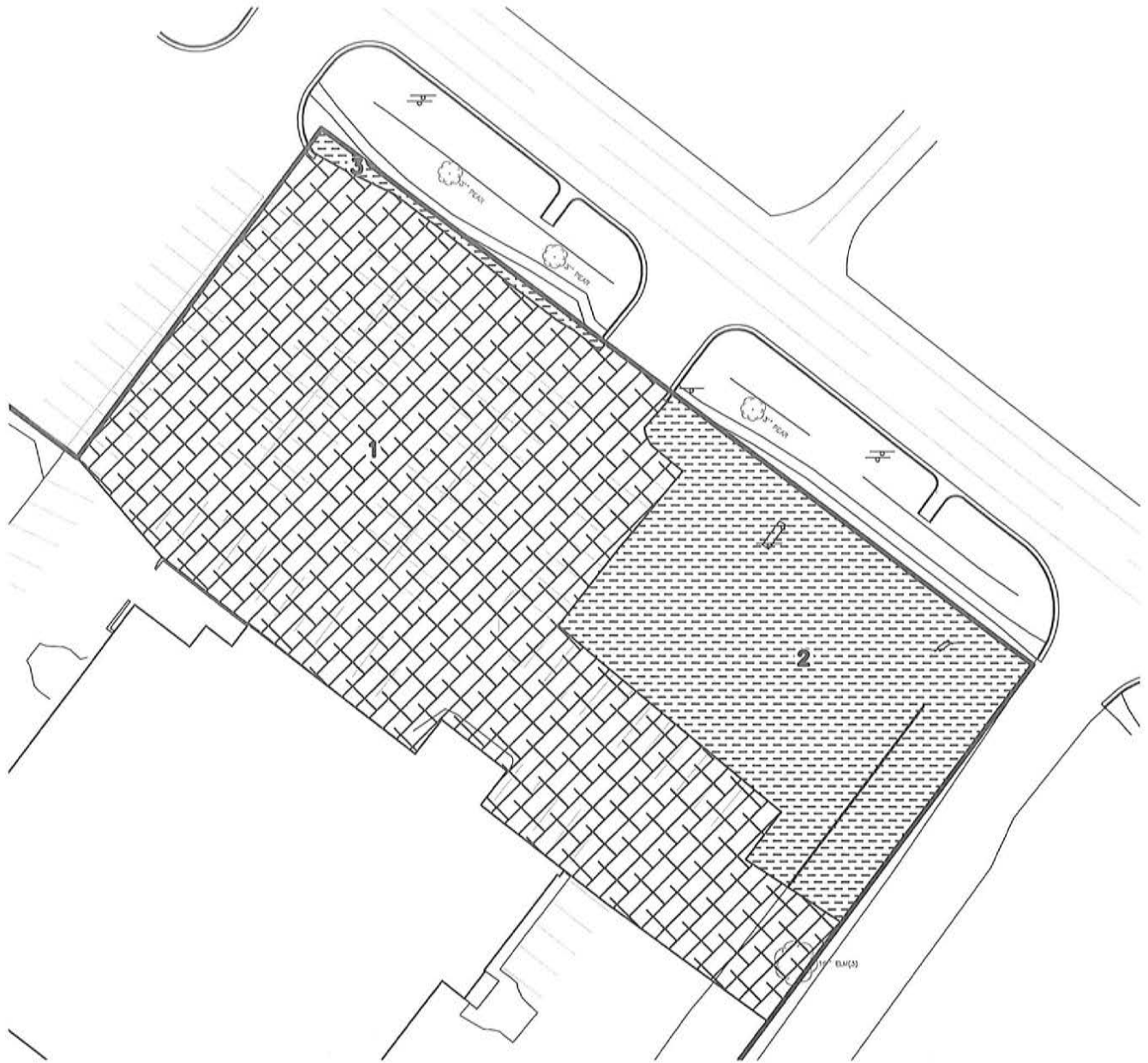
Figure 7 provides computation of the discharge velocity to the Cedar Street roadside ditch.

Figure 8 provides the MDOT Form 2484 "Drainage Design Checklist" which summarizes the runoff characteristics of the discharge to the MDOT road ditch facility.

LOCATION MAP



EXISTING CONDITIONS



Runoff Areas	
Description : No.	Area (sft)
Ex Vegetated C soil <4% : 2	15423
Ex Vegetated C soil <4% : 3	549
Roof-Pav (EX) : 1	36159

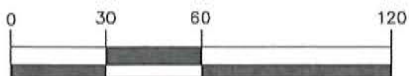
15,972 SF

(0.37Ac)

(0.83Ac)

$\Sigma = 1.20 \text{ Ac}$

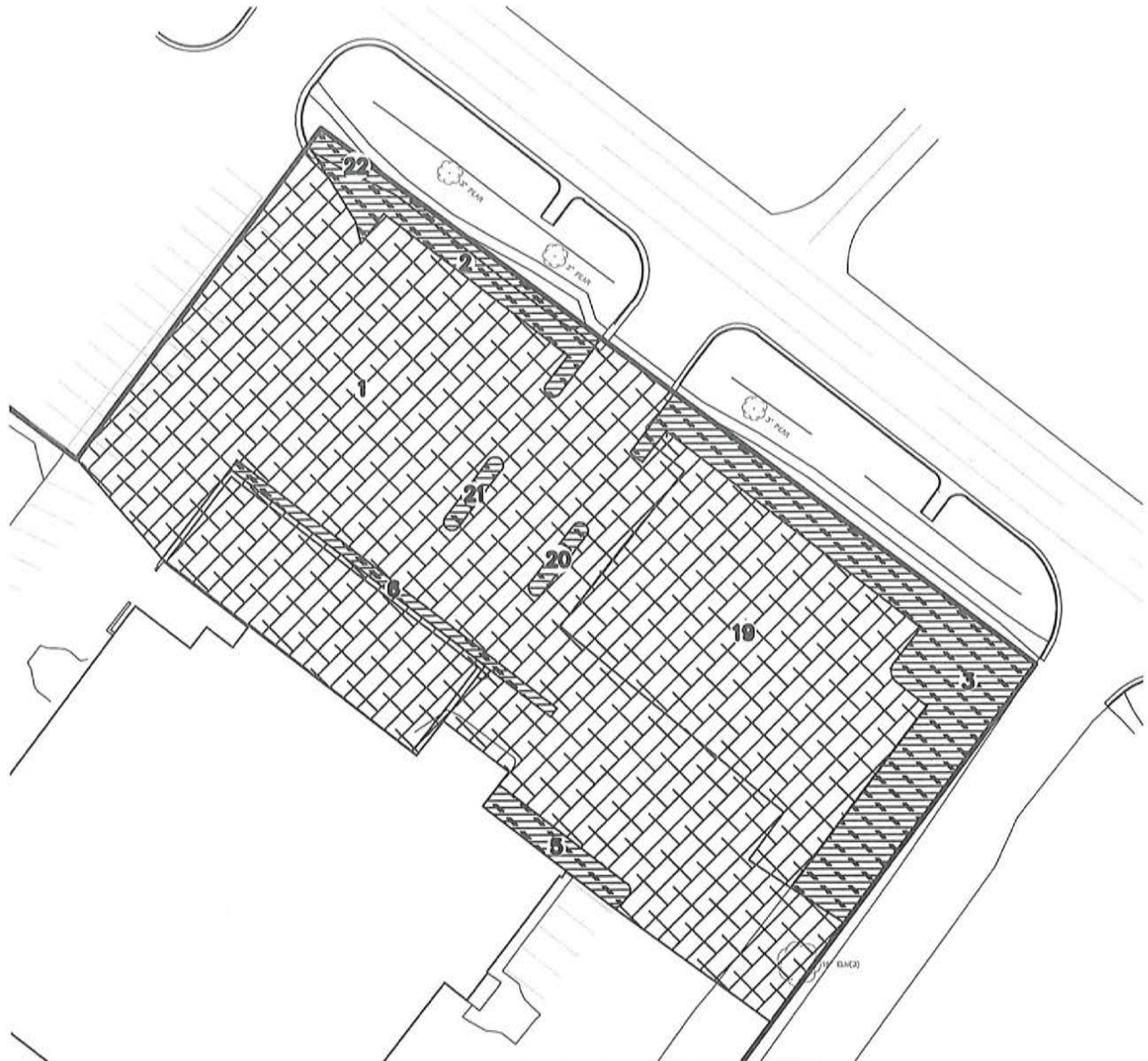
GRAPHIC SCALE



(IN FEET)

1 inch = 60 ft.

PROPOSED CONDITIONS



Runoff Areas	
Description : No.	Area (sft)
Pr Vegetated C soil <4% : 2	1160
Pr Vegetated C soil <4% : 3	5196
Pr Vegetated C soil <4% : 5	617
Pr Vegetated C soil <4% : 6	592
Pr Vegetated C soil <4% : 20	184
Pr Vegetated C soil <4% : 21	184
Pr Vegetated C soil <4% : 22	540
Roof-Pav (PR) : 1	33423
Roof-Pav (PR) : 19	10240

8,473 SF
(0.20 Ac)

43,663 SF
(1.00 Ac)

SITE DEVELOPMENT STORMWATER TOOL (SDST)

Runoff Calculations
for Reduction of Runoff
Rate and Volume in
Existing Parking Lot,

SITE

Name	City Limits
Parcel Identification	33-19-10-05-53-006
Location Address	801 North Cedar Street, Mason, MI 48854
Nearest Major Intersection	Cedar Street and Kerns Road

OWNER

Contact	
Organization	City Limits
Address	801 North Cedar Street, Mason, MI 48854
Phone	
Email	

CALCULATIONS PERFORMED BY

Contact	Kurt R. Krahulik, P.e.
Organization	DC Engineering, P.C.
Address	1210 N Cedar Street, Suite B, Lansing, Mi 48906
Phone	(517) 853-7861
Email	kkrahulik@DCEngPC.com
Date	
QC By:	
QC Date:	

PROJECT DESCRIPTION

This model is run to analyze the impacts of reducing the impervious area to the existing parking lot. The resulting reduction in flow rates and runoff volumes will be used to offset the runoff rates and volumes for the additional parking lot construction.

COMMENTS, QUESTIONS, OR CONCERNS**FOR CITY USE ONLY**

Site Plan Review

Reviewed by
Approved by
Date
Comments:

PURPOSE

The purpose of this spreadsheet model is to assist the design professional with sizing stormwater control measures for a given site development project. The spreadsheet model generates flow conditions based on the NRCS Curve Number approach using curvilinear unit hydrographs and a Type II rainfall distribution. Flow is passed through the stormwater control measures using a simple reservoir routing technique. The intent of the spreadsheet model is to help simplify the calculation steps but is by no means a substitute for professional engineering judgement.

STEPS

1	Site Area and Soil Type	Input site total area and the native soil type. A manual entry for the infiltration rate can be input. Backup information supporting the infiltration rate should be provided when manually adjusting the default values.
2	Condition Prior to Development	Use the drop down boxes to select the cover type for the site and enter the surface area for each cover type. Up to five (5) separate cover types may be selected. The composite CN for the site is automatically calculated. Manual entry of the CN is allowed as an alternative. Time of concentration is also entered. Total site area must equal the area entered in Step 1.
3	Post Development Condition	Use the drop down boxes to select the cover type for the site and enter the surface area for each cover type. Up to five (5) separate cover types may be selected. The composite CN for the site is automatically calculated. Manual entry of the CN is allowed as an alternative. Time of concentration is also entered. Total site area must equal the area entered in Step 1.
4		
5	Job Control	Job control information that doesn't normally change. Do nothing in this section
6	Stormwater Control Measures	Enter SCMs here. First enter the cross-sectional information, next enter the outlet control mechanism. Cross-section information is entered from the bottom up. Evaporation and infiltration may be toggled on and off for each control measure independently. It is suggested to work first on the smallest storm and meet the criterion. Then work sequentially on the larger events meeting the incremental criteria for each event.
7	Individual Results	This section shows the detailed results for each SCM.
8	Global Results	This section shows the global results and whether design criteria have been met.

CELL FORMATTING

STEP X	Step number headings
labels	Labels
input	Input Cells
calculation	Calculated Cells
linked	Linked Cells (similar to calculated cells)
standardized variables	Input Cells, but these are standardized variables and normally should not be changed

NOMENCLATURE

CN	Curve Number
Coefficient C	Orifice coefficient (typical value is 0.6) or the Weir coefficient (typical value 3.0) depending on selected outlet type
CPD	Condition Prior to Development
Dev	Development
ET	Evapotranspiration
Infil	Infiltration
Len	Length
NA	Not Applicable
Outflow	Sum of Outlet flow and Overflow (Step 7)
Outlet	Discharge through the orifice or weir (Step 7)
Overflow	Discharge overflowing the SCM (Step 7)
PRF	Peak Rate Factor (a shape factor associated with the curvilinear unit hydrograph)
Qpeak	Peak Flow
S. Area	Surface Area
SCM	Stormwater Control Measure
Vol	Volume

MODELING CAVEATS

- 1 The design professional is responsible for proper placement of the stormwater control measure on the site to achieve the necessary overall site drainage control.
- 2
- 3

REFERENCES

- 1 USDA NRCS NEH Part 630 Hydrology: Chp 7 Hydrologic Soil Groups, Chp 8 Land Uses and Treatment Classes, Chp 9 Hydrologic Soil-Cover Complexes, Chp 10 Estimation of Direct Runoff from Storm Rainfall, Chp 15 Time of Concentration, and Chp 16 Hydrographs
- 2 Spreadsheet model developed by Dan Christian, Tetra Tech. (517) 394-8615. Dan.Christian@tetratech.com

SITE CHARACTERISTICS

STEP 1

SITE AREA 0.83 acres

SOIL TYPE

Sandy clay loam

HSG

C

Auto

0.17

Manual

0.38

Infil (in/hr)

0.38

NRCS Velocity Method for Time of Concentration

2-year 24-hour Rainfall (in)

2.42

Please provide backup information to support manual entry of infiltration rate

SEE NRCS Web Soil Survey
FIGURE 4

CONDITION PRIOR TO DEVELOPMENT

Surface Cover

No.	Cover	Area (ac)	CN
1	Urban Open Space (lawns, parks, golf, cemeteries) Poor (grass cover <50%)	0.01	81
2	Urban Paved Parking, Roofs, Driveways (excl. ROW) 100% impervious	0.82	98
3	Not Used		NA
4	Not Used		NA
5	Not Used		NA
6	Manual Entry		
	Total	0.83	

Time of Concentration

No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Tt (hr)
1	Sheet Flow - Dense grasses	0.02	0.24	5	0.02
2	Shallow Conc. - Pavement and small upland gullies	0.02	0.025	200	0.02
3	Not Used		NA		0.00
4	Not Used		NA		0.00
5	Not Used		NA		0.00
6	Manual Entry				
	CPD Tc (hr)				0.10

POST DEVELOPMENT CONDITIONS

Surface Cover

No.	Cover	Area (ac)	CN
1	Urban Paved Parking, Roofs, Driveways (excl. ROW) 100% impervious	0.74	98
2	Urban Open Space (lawns, parks, golf, cemeteries) Good (grass cover >50%)	0.09	64
3	Not Used		NA
4	Not Used		NA
5	Not Used		NA
6	Manual Entry	0	
	Total	0.83	

Time of Concentration

No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Tt (hr)
1	Sheet Flow - Smooth Surface	0.02	0.011	75	0.02
2	Shallow Conc. - Pavement and small upland gullies	0.02	0.025	200	0.02
3	Not Used		NA		0.00
4	Not Used		NA		0.00
5	Not Used		NA		0.00
6	Manual Entry				
	Post Tc (hr)				0.10

JOB CONTROL

CLIMATOLOGY DATA

	Water Quality Treatment Volume	Channel Protection Pipe)	Collection System	Roadway Flood System
Recurrence Interval	0.9	2-year	10-year	100-year
Duration (hr)	24-hr	24-hr	24-hr	24-hr
Precipitation (in)	0.90	2.41	3.35	5.36

Evapotranspiration (in/day)

Hyetograph Distribution

0.1

Type II

RAIN FALL PER ATLAS 14
SEE FIGURE 5

DESIGN CRITERIA

	Recurrence Interval	90%	2-year	10-year	100-year
Treatment of Runoff for Sediment Load	Yes	NA	NA	NA	NA
Peak flow (% of CPD)	NA	100%	100%	100%	100%
Volume (% of CPD)	NA	100%	NA	NA	NA
Dewater Time (hr), surface water [time from end of rainfall]	NA	24	24	48	
Dewater Time (hr), complete drainage [time from end of rainfall]	NA	48	72	72	

CONDITION PRIOR TO DEVELOPMENT

Peak Rate Factor (PRF)	484			
Ratio of Initial Abstraction to Potential Maximum Retention ($\lambda = I_a/S$)	0.05			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.41	3.35	5.36
Actual retention after runoff begins (in) [F]	0.19	0.22	0.23	0.23
Precipitation Excess (aka runoff) (in) [Q]	0.71	2.19	3.12	5.13
Precipitation Excess (aka runoff) (cf) [Q]	2,141	6,599	9,410	15,442
Precipitation Excess as a fraction of the total rainfall (%)	79%	91%	93%	96%

POST DEVELOPMENT CONDITIONS (No SCMs)

Peak Rate Factor (PRF)	484			
Ratio of Initial Abstraction to Potential Maximum Retention ($\lambda = I_a/S$)	0.05			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.41	3.35	5.36
Actual retention after runoff begins (in) [F]	0.25	0.38	0.43	0.51
Precipitation Excess (aka runoff) (in) [Q]	0.65	2.03	2.92	4.85
Precipitation Excess (aka runoff) (cf) [Q]	1,946	6,108	8,783	14,603
Precipitation Excess as a fraction of the total rainfall (%)	72%	84%	87%	90%

STEP 5

STORMWATER CONTROL MEASURES

STEP 6

SCM 1

Practice Type	None
Drainage Area (ac)	0.35
Discharge To	SCM 2

User Input Notes and Comments

Sediment Strategy 2: Retention and Infiltration

X-sec Entry Auto Calc Rectangular Shape: User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top			xH:1V	21.0	100.0	2,100.0	0							
	NA			21.0	100.0	2,100.0	0			NA	NA	100%		0
	NA			21.0	100.0	2,100.0	0			NA	NA	100%		0
	NA			21.0	100.0	2,100.0	0			NA	NA	100%		0
	NA			21.0	100.0	2,100.0	0			NA	NA	100%		0
Bottom	Aggregate Reservoir (40%)	24	0	21.0	100.0	2,100.0	4,200.0			NA	NA	40%		1,680.0
	Total	24					4,200.0		0					1,680.0

Surface Storage Depth (in)	0
Media Storage Depth (in)	24
Media (limiting) Infiltration Rate (in/hr)	100

Allowed Area (sf)	
Evaporation	Yes 2,100
Infiltration (through bottom)	Yes 2,100

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

SCM 2

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape: User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top			xH:1V	0.0	0.0	0	0							
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Bottom	NA					0	0	0	0	NA	NA	100%		0
	Total	0					0		0				Total	0

Surface Storage Depth (in)	0.00
Media Storage Depth (in)	0
Media (limiting) Infiltration Rate (in/hr)	10

Allowed Area (sf)	
Evaporation	Yes 0
Infiltration (through bottom)	Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

STEP 6 con't

SCM 3

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top			xH:1V	0.0	0.0	0	0	0	0	0	NA	NA	100%	0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Bottom	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	Total	0					0		0			Total		0

Surface Storage Depth (in)	0.00
Media Storage Depth (in)	0
Media (limiting) Infiltration Rate (in/hr)	10

Allowed Area (sf)	
Evaporation	Yes 0
Infiltration (through bottom)	Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

SCM 4

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top			xH:1V	0.0	0.0	0	0	0	0	0	NA	NA	100%	0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Bottom	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	Total	0					0		0			Total		0

Surface Storage Depth (in)	0.00
Media Storage Depth (in)	0
Media (limiting) Infiltration Rate (in/hr)	10

Allowed Area (sf)	
Evaporation	Yes 0
Infiltration (through bottom)	Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

INDIVIDUAL SCM RESULTS

STEP 7

SCM 1		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
	Continuity	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Continuity	NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

SCM 2		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
	Continuity	NA	NA	NA	NA
	Continuity	NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

STEP 7 con't

SCM 3		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
Continuity		NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

SCM 4		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
Continuity		NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

STEP 8

DRAINAGE AREA SUMMARY

Practice	Type	Drainage Area (ac)	% of Drainage	Discharge To	Sediment Criteria
SCM 1	None	0	0.0%	NA	NA
SCM 2	None	0	0.0%	NA	NA
SCM 3	None	0	0.0%	NA	NA
SCM 4	None	0	0.0%	NA	NA
Uncontrolled		0.83	100.0%	Offsite	Yes
Total		0.83	100.0%		

SEDIMENT CONTROL STRATEGY FOR UNCONTROLLED PORTIONS OF THE SITE

Required **Yes** Strategy **4. Hydrodynamic sediment removal device (prefabricated device)**

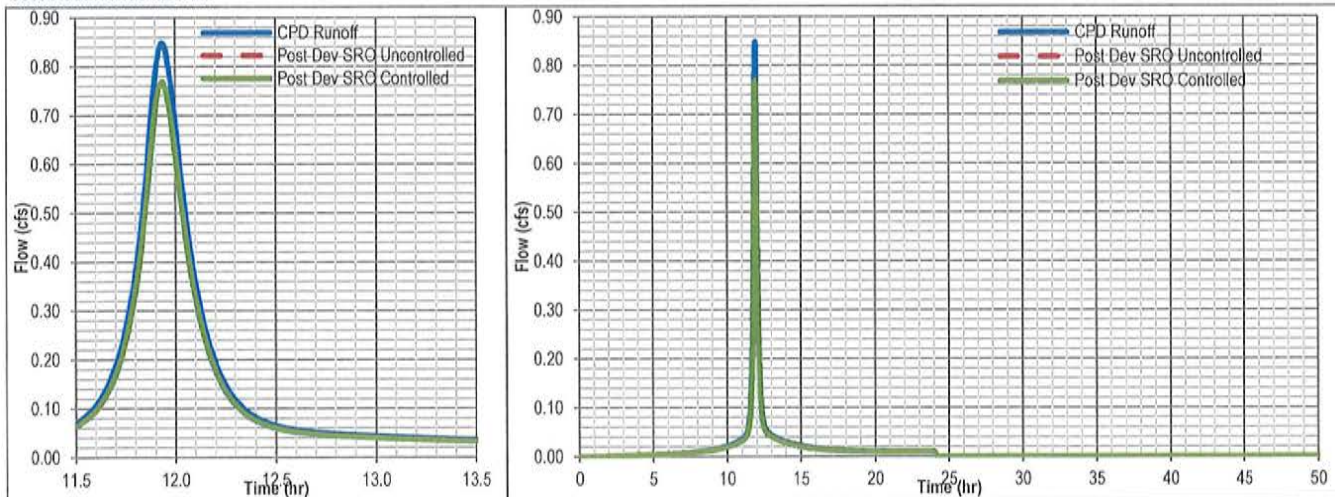
Notes:

TOTAL SYSTEM RESULTS

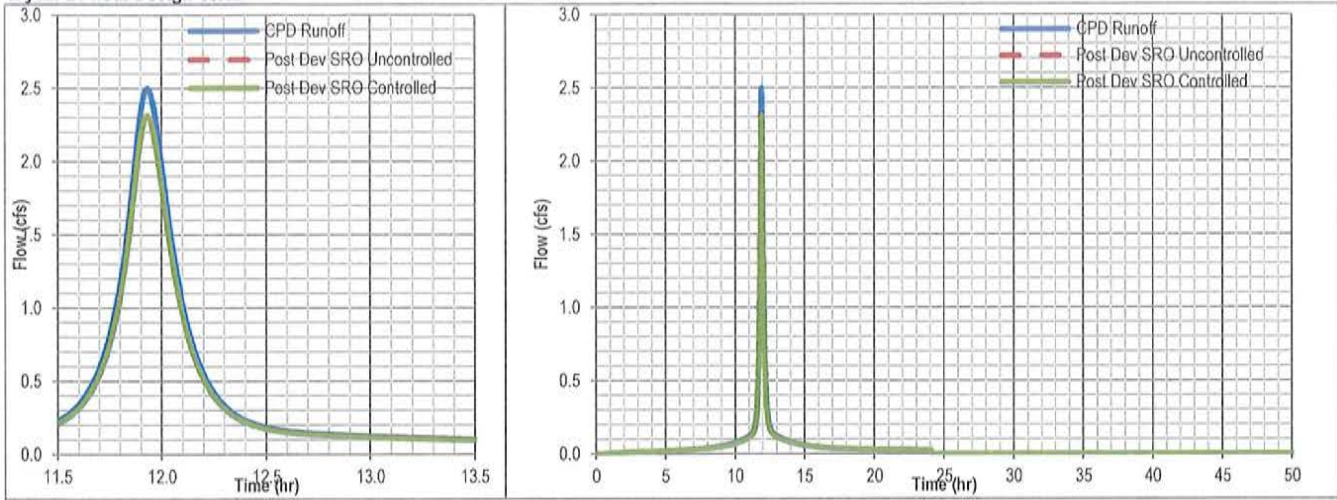
Recurrence Interval		90%	2-year	10-year	100-year
PEAK FLOW	CPD Runoff (cfs)	0.85	2.50	3.52	5.68
	Post Dev SRO Uncontrolled (cfs)	0.77	2.31	3.29	5.39
	Post Dev SRO Controlled (cfs)	0.77	2.31	3.29	5.39
	Difference CPD - Post Dev (cfs)	0.1	0.2	0.2	0.3
	Criteria	NA	Qpost <= 2.5 cfs	Qpost <= 3.5 cfs	Qpost <= 5.7 cfs
	Criteria Met (Y/N)	NA	Yes	Yes	Yes
VOLUME	CPD Runoff (cf)	2,141	6,598	9,410	15,442
	Post Dev Runoff (cf)	1,946	6,108	8,783	14,603
	ET (cf)	0	0	0	0
	Infiltration (cf)	0	0	0	0
	Outflow (cf)	1,946	6,108	8,783	14,603
	Remaining Storage (cf)	0	0	0	0
	Continuity Error (%)	0.00%	0.00%	0.00%	0.00%
	Continuity Check	Okay	Okay	Okay	Okay
	Criteria	NA	Qpost <= 6598 cf	NA	NA
	Criteria Met (Y/N)	NA	Yes	NA	NA
SEDIMENT	Criteria Met (Y/N)	Yes	NA	NA	NA
DEWATER TIME	Surface Water Dewater Time (hr)	0.0	0.0	0.0	0.0
	Criteria	NA	<= 24 hrs	<= 24 hrs	<= 48 hrs
	Criteria Met (Y/N)	Yes	Yes	Yes	Yes
	Complete Drainage Dewater Time (hr)	0.0	0.0	0.0	0.0
	Criteria	NA	<= 48 hrs	<= 72 hrs	<= 72 hrs
	Criteria Met (Y/N)	Yes	Yes	Yes	Yes

* results are based on a 100-hour simulation

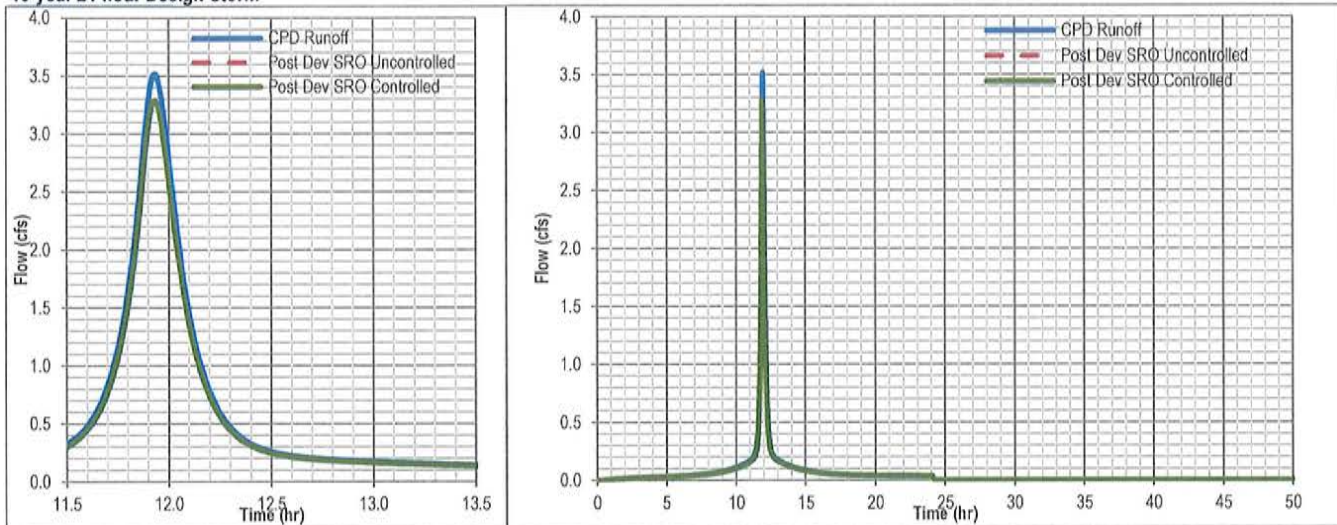
90% Recurrence Interval



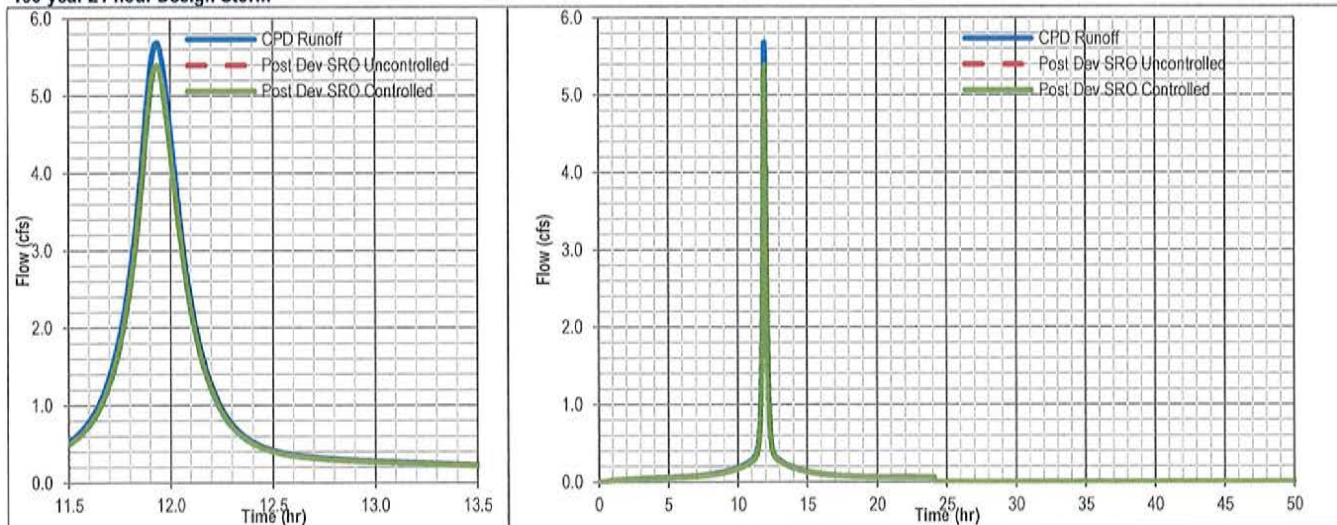
2-year 24-hour Design Storm



10-year 24-hour Design Storm



100-year 24-hour Design Storm



SITE DEVELOPMENT STORMWATER TOOL (SDST)

Runoff Calculations

For Parking Lot
Addition**SITE**

Name	City Limits
Parcel Identification	33-19-10-05-53-006
Location Address	801 North Cedar Street, Mason, MI 48854
Nearest Major Intersection	Cedar Street and Kerns Road

OWNER

Contact	
Organization	City Limits
Address	801 North Cedar Street, Mason, MI 48854
Phone	
Email	

CALCULATIONS PERFORMED BY

Contact	Kurt R. Krahulik, P.e.
Organization	DC Engineering, P.C.
Address	1210 N Cedar Street, Suite B, Lansing, MI 48906
Phone	(517) 853-7861
Email	kkrahulik@DCEngPC.com
Date	
QC By:	
QC Date:	

PROJECT DESCRIPTION

Project consists of the construction a building addition into the existing parking lot and the construction of additional parking lot. The existing parking lot and building currently drain by overland flow to the northwest corner of the site where runoff is collected by a culvert which conveys the runoff to the existing MDOT roadside ditch along the south side of the US 127 exit ramp. The existing lawn area at the southeast corner of the site, to be converted to proposed parking lot, generally drains to the east into the MDOT roadside ditch along the west side of Cedar Street (MDOT 36). The runoff from the proposed parking construction will be drained by overland flow to a surface detention system at the south end of the parking lot. The detention system will be designed to control the 2 year, 10 year and 100 year flows to pre-existing rate, and control the 2 year runoff volume to pre-existing rate. The existing parking lot to the north of the proposed parking addition will have 4 landscape islands installed and be re-aligned to allow for removal of impervious surface along the east edge of the parking lot. This reduction of impervious area, and resulting decrease in runoff rate and volume, will be incorporated into the discharge rate and volume of the proposed detention system for the additional parking lot area. The infiltration rate for the detention basin was obtained from the NRCS Websoil Survey for a UIB-Urban Land Marlette complex. The average infiltration rate for the subsoils at the proposed detention basin bottom was utilized in the model.

COMMENTS, QUESTIONS, OR CONCERNS**FOR CITY USE ONLY**

Site Plan Review

Reviewed by
Approved by
Date
Comments:

PURPOSE

The purpose of this spreadsheet model is to assist the design professional with sizing stormwater control measures for a given site development project. The spreadsheet model generates flow conditions based on the NRCS Curve Number approach using curvilinear unit hydrographs and a Type II rainfall distribution. Flow is passed through the stormwater control measures using a simple reservoir routing technique. The intent of the spreadsheet model is to help simplify the calculation steps but is by no means a substitute for professional engineering judgement.

STEPS

1	Site Area and Soil Type	Input site total area and the native soil type. A manual entry for the infiltration rate can be input. Backup information supporting the infiltration rate should be provided when manually adjusting the default values.
2	Condition Prior to Development	Use the drop down boxes to select the cover type for the site and enter the surface area for each cover type. Up to five (5) separate cover types may be selected. The composite CN for the site is automatically calculated. Manual entry of the CN is allowed as an alternative. Time of concentration is also entered. Total site area must equal the area entered in Step 1.
3	Post Development Condition	Use the drop down boxes to select the cover type for the site and enter the surface area for each cover type. Up to five (5) separate cover types may be selected. The composite CN for the site is automatically calculated. Manual entry of the CN is allowed as an alternative. Time of concentration is also entered. Total site area must equal the area entered in Step 1.
4		
5	Job Control	Job control information that doesn't normally change. Do nothing in this section
6	Stormwater Control Measures	Enter SCMs here. First enter the cross-sectional information, next enter the outlet control mechanism. Cross-section information is entered from the bottom up. Evaporation and infiltration may be toggled on and off for each control measure independently. It is suggested to work first on the smallest storm and meet the criterion. Then work sequentially on the larger events meeting the incremental criteria for each event.
7	Individual Results	This section shows the detailed results for each SCM.
8	Global Results	This section shows the global results and whether design criteria have been met.

CELL FORMATTING

STEP X	Step number headings
labels	Labels
input	Input Cells
calculation	Calculated Cells
linked	Linked Cells (similar to calculated cells)
standardized variables	Input Cells, but these are standardized variables and normally should not be changed

NOMENCLATURE

CN	Curve Number
Coefficient C	Orifice coefficient (typical value is 0.6) or the Weir coefficient (typical value 3.0) depending on selected outlet type
CPD	Condition Prior to Development
Dev	Development
ET	Evapotranspiration
Infil	Infiltration
Len	Length
NA	Not Applicable
Outflow	Sum of Outlet flow and Overflow (Step 7)
Outlet	Discharge through the orifice or weir (Step 7)
Overflow	Discharge overflowing the SCM (Step 7)
PRF	Peak Rate Factor (a shape factor associated with the curvilinear unit hydrograph)
Qpeak	Peak Flow
S. Area	Surface Area
SCM	Stormwater Control Measure
Vol	Volume

MODELING CAVEATS

- 1 The design professional is responsible for proper placement of the stormwater control measure on the site to achieve the necessary overall site drainage control.
- 2
- 3

REFERENCES

- 1 USDA NRCS NEH Part 630 Hydrology: Chp 7 Hydrologic Soil Groups, Chp 8 Land Uses and Treatment Classes, Chp 9 Hydrologic Soil-Cover Complexes, Chp 10 Estimation of Direct Runoff from Storm Rainfall, Chp 15 Time of Concentration, and Chp 16 Hydrographs
- 2 Spreadsheet model developed by Dan Christian, Tetra Tech. (517) 394-8615. Dan.Christian@tetratech.com

SITE CHARACTERISTICS

STEP 1

SITE AREA 0.37 acres

SOIL TYPE

Sandy clay loam

HSG

C

Auto

0.17

Manual

0.38

Infil (in/hr)

0.38

NRCS Velocity Method for Time of Concentration

2-year 24-hour Rainfall (in)

2.42

Please provide backup information to support manual entry of infiltration rate

SEE NRCS WEBSON SURVEY
FIGURE 4

CONDITION PRIOR TO DEVELOPMENT

STEP 2

Surface Cover

No.	Cover	Area (ac)	CN
1	Urban Open Space (lawns, parks, golf, cemeteries) Good (grass cover >50%)	0.37	64
2	Not Used		NA
3	Not Used		NA
4	Not Used		NA
5	Not Used		NA
6	Manual Entry		
	Total	0.37	

Time of Concentration

No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Tt (hr)
1	Sheet Flow - Dense grasses	0.02	0.24	100	0.27
2	Shallow Conc. - Grassed waterways	0.01	0.05	50	0.01
3	Not Used		NA		0.00
4	Not Used		NA		0.00
5	Not Used		NA		0.00
6	Manual Entry				
CPD Tc (hr)					0.29

POST DEVELOPMENT CONDITIONS

STEP 3

Surface Cover

No.	Cover	Area (ac)	CN
1	Urban Paved Parking, Roofs, Driveways (excl. ROW) 100% Impervious	0.26	98
2	Urban Open Space (lawns, parks, golf, cemeteries) Good (grass cover >50%)	0.11	64
3	Not Used		NA
4	Not Used		NA
5	Not Used		NA
6	Manual Entry	0	
	Total	0.37	

di

Time of Concentration

No.	Surface Feature	Slope (ft/ft)	Manning n	Length (ft)	Tt (hr)
1	Sheet Flow - Smooth Surface	0.02	0.011	50	0.01
2	Shallow Conc. - Pavement and small upland gullies	0.02	0.025	125	0.01
3	Not Used		NA		0.00
4	Not Used		NA		0.00
5	Not Used		NA		0.00
6	Manual Entry				
Post Tc (hr)					0.10

JOB CONTROL

CLIMATOLOGY DATA

	Water Quality Treatment Volume	Channel Protection Pipe)	Collection System	Roadway Flood System
Recurrence Interval	0.9	2-year	10-year	100-year
Duration (hr)	24-hr	24-hr	24-hr	24-hr
Precipitation (in)	0.90	2.41	3.35	5.36

Evapotranspiration (in/day)

Hyetograph Distribution

0.1

Type II

RAINFALL PER ATLAS 14
SEE FIGURE 5

DESIGN CRITERIA

	Recurrence Interval	90%	2-year	10-year	100-year
Treatment of Runoff for Sediment Load	Yes	NA	NA	NA	NA
Peak flow (% of CPD)	NA	100%	100%	100%	100%
Volume (% of CPD)	NA	100%	NA	NA	NA
Dewater Time (hr), surface water [time from end of rainfall]	NA	24	24	48	
Dewater Time (hr), complete drainage [time from end of rainfall]	NA	48	72	72	

CONDITION PRIOR TO DEVELOPMENT

Peak Rate Factor (PRF)	484			
Ratio of Initial Abstraction to Potential Maximum Retention $\lambda = I_a/S$	0.05			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.41	3.35	5.36
Actual retention after runoff begins (in) [F]	0.84	1.83	2.27	2.95
Precipitation Excess (aka runoff) (in) [Q]	0.06	0.58	1.08	2.41
Precipitation Excess (aka runoff) (cf) [Q]	82	783	1,451	3,230
Precipitation Excess as a fraction of the total rainfall (%)	7%	24%	32%	45%

POST DEVELOPMENT CONDITIONS (No SCMs)

Peak Rate Factor (PRF)	484			
Ratio of Initial Abstraction to Potential Maximum Retention $\lambda = I_a/S$	0.05			
Recurrence Interval	90%	2-year	10-year	100-year
Precipitation (in) [P]	0.90	2.41	3.35	5.36
Actual retention after runoff begins (in) [F]	0.38	0.69	0.82	1.03
Precipitation Excess (aka runoff) (in) [Q]	0.52	1.72	2.53	4.33
Precipitation Excess (aka runoff) (cf) [Q]	701	2,312	3,393	5,815
Precipitation Excess as a fraction of the total rainfall (%)	58%	71%	75%	81%

STEP 5

STORMWATER CONTROL MEASURES

STEP 6

SCM 1

Practice Type	Detention
Drainage Area (ac)	0.37
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy 2. Retention and Infiltration

X-sec Entry Auto Calc Rectangular Shape: User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Ratio	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top	NA		xH:1V	14.5	226.5	3,284	0			NA	NA	100%		0
	NA			14.5	226.5	3,284	0			NA	NA	100%		0
	NA			14.5	226.5	3,284	0			NA	NA	100%		0
	NA			14.5	226.5	3,284	0			NA	NA	100%		0
Bottom	Surface Storage	21	3	4.0	216.0	864	3,402			NA	NA	100%		3,402
	Total	21					3,402		0					3,402

Surface Storage Depth (in)

21

Media Storage Depth (in)

0

Media (limiting) Infiltration Rate (in/hr)

0.38

Allowed Area (sf)

Evaporation Yes 3284

Infiltration (through bottom) Yes 864

Outlet Type	Orifice	None	None	None	None
Offset from bottom (in)	3				
coefficient c	0.6				
Area (sf) or Length (ft)	0.196				
Volume below the offset (cf)	486.06	NA	NA	NA	NA

6" Ø ORIFICE

ORIFICE SET 3" ABOVE BASIN BOTTOM TO PROMOTE/FORCE IN INFILTRATION.

SCM 2

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape: User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Ratio	Void Ratio	UserDef Void Override	Water Sto Vol (cf)
Top	NA		xH:1V	0.0	0.0	0	0			NA	NA	100%		0
	NA			0	0.0	0.0	0			NA	NA	100%		0
	NA			0	0.0	0.0	0			NA	NA	100%		0
	NA			0	0.0	0.0	0			NA	NA	100%		0
Bottom	NA			0	0.0	0.0	0			NA	NA	100%		0
	Total	0					0		0					0

Surface Storage Depth (in)

0.00

Media Storage Depth (in)

0

Media (limiting) Infiltration Rate (in/hr)

10

Allowed Area (sf)

Evaporation Yes 0

Infiltration (through bottom) Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

STEP 6 con't

SCM 3

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape, User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void	Water Sto Vol (cf)
Top			xH:1V	0.0	0.0	0	0	0	0	0	NA	NA	100%	0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Bottom	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Total		0					0		0			Total		0

Surface Storage Depth (in)	0.00
Media Storage Depth (in)	0
Media (limiting) Infiltration Rate (in/hr)	10

Allowed Area (sf)	
Evaporation	Yes 0
Infiltration (through bottom)	Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

SCM 4

Practice Type	None
Drainage Area (ac)	
Discharge To	Offsite

User Input Notes and Comments

Sediment Strategy Select Strategy

X-sec Entry Auto Calc Rectangular Shape, User Defined Bottom and Side Slopes

Cross Section	Media	Layer (in)	Side Slope	Width (ft)	Len (ft)	Surface Area (sf)	Total Vol (cf)	User Input SA (sf)	Vol (cf)	Porosity Capacity	Field Capacity	Void Ratio	UserDef Void	Water Sto Vol (cf)
Top			xH:1V	0.0	0.0	0	0	0	0	0	NA	NA	100%	0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Bottom	NA		0	0.0	0.0	0	0	0	0	NA	NA	100%		0
Total		0					0		0			Total		0

Surface Storage Depth (in)	0.00
Media Storage Depth (in)	0
Media (limiting) Infiltration Rate (in/hr)	10

Allowed Area (sf)	
Evaporation	Yes 0
Infiltration (through bottom)	Yes 0

Outlet Type	None	None	None	None	None
Offset from bottom (in)					
coefficient c					
Area (sf) or Length (ft)					
Volume below the offset (cf)	NA	NA	NA	NA	NA

INDIVIDUAL SCM RESULTS

STEP 7

SCM 1		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.3	0.9	1.3	2.2
	Outlet (cfs)	0.0	0.4	0.6	0.8
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.4	0.6	0.8
Depth	Max (in)	2.3	5.0	7.0	11.1
	Remaining (in)	0.0	0.0	0.0	0.0
Volume	Inflow (cf)	701	2,312	3,393	5,815
	ET (cf)	35	46	47	47
	Infil (cf)	666	1,039	1,080	1,108
	Outlet (cf)	0	1,227	2,266	4,660
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	1,227	2,266	4,660
	Remaining (cf)	0	0	0	0
	Continuity	0.00%	0.00%	0.00%	0.00%
	Continuity	Okay	Okay	Okay	Okay
	Continuity	Okay	Okay	Okay	Okay
Dewater	Surface (hr)	8.5	17.2	17.2	17.2
	Complete (hr)	-24.0	0.1	0.1	0.1

← No Overflows. Runoff Controlled By
Proposed Facility
← Ponding Depth in Basin

Sediment Criteria Met? Yes (filtered through media)

SCM 2		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
	Continuity	NA	NA	NA	NA
	Continuity	NA	NA	NA	NA
	Continuity	NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

STEP 7 con't

SCM 3		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
Continuity		NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

SCM 4		90%	2-year	10-year	100-year
Qpeak	Inflow (cfs)	0.0	0.0	0.0	0.0
	Outlet (cfs)	0.0	0.0	0.0	0.0
	Overflow (cfs)	0.0	0.0	0.0	0.0
	Outflow (cfs)	0.0	0.0	0.0	0.0
Depth	Max (in)	0.0	0.0	0.0	0.0
	Remaining (in)	NA	NA	NA	NA
Volume	Inflow (cf)	0	0	0	0
	ET (cf)	0	0	0	0
	Infil (cf)	0	0	0	0
	Outlet (cf)	0	0	0	0
	Overflow (cf)	0	0	0	0
	Outflow (cf)	0	0	0	0
	Remaining (cf)	0	0	0	0
Continuity		NA	NA	NA	NA
Dewater	Surface (hr)	NA	NA	NA	NA
	Complete (hr)	NA	NA	NA	NA

Sediment Criteria Met? NA

STEP 8

DRAINAGE AREA SUMMARY

Practice	Type	Drainage Area (ac)	% of Drainage	Discharge To	Sediment Criteria
SCM 1	Detention	0.37	100.0%	Offsite	Yes
SCM 2	None	0	0.0%	NA	NA
SCM 3	None	0	0.0%	NA	NA
SCM 4	None	0	0.0%	NA	NA
Uncontrolled		0	0.0%	Offsite	NA
Total		0.37	100.0%		

AVERAGE ANNUAL RAINFALL FULLY CONTAINED
IN BASIN & INFILTRATED. THEREFORE
CLEANSING IS ACHIEVED.

SEDIMENT CONTROL STRATEGY FOR UNCONTROLLED PORTIONS OF THE SITE

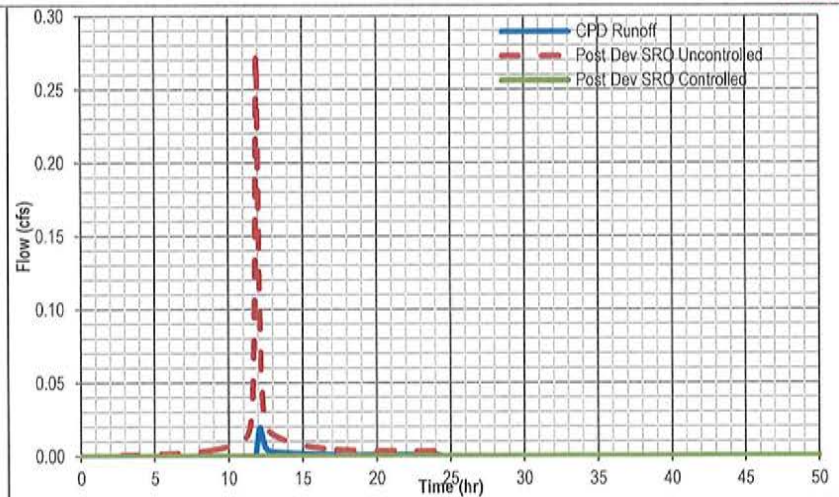
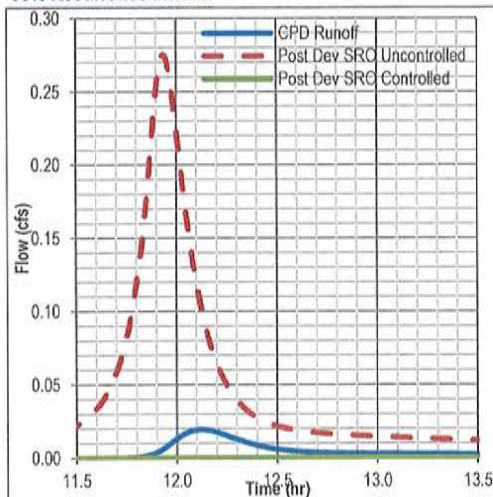
Required	No	Strategy 4 - Hydrodynamic sediment removal device (prefabricated device)
Notes		

TOTAL SYSTEM RESULTS

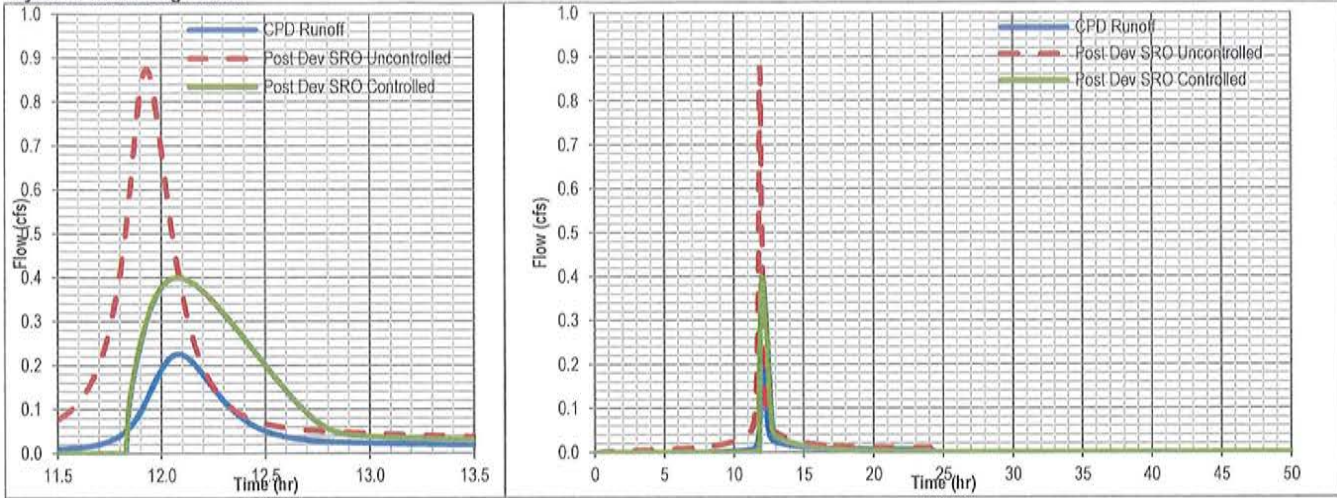
		Recurrence Interval	90%	2-year	10-year	100-year
PEAK FLOW	CPD Runoff (cfs)		0.02	0.23	0.43	0.97
	Post Dev SRO Uncontrolled (cfs)		0.28	0.88	1.27	2.17
	Post Dev SRO Controlled (cfs)		0.00	0.40	0.55	0.79
	Difference CPD - Post Dev (cfs)		0.0	(0.2)	(0.1)	0.2
	Criteria		NA	Qpost <= 0.2 cfs	Qpost <= 0.4 cfs	Qpost <= 1 cfs
		Criteria Met (Y/N)	NA	No	No	Yes
VOLUME	CPD Runoff (cf)		82	783	1,451	3,230
	Post Dev Runoff (cf)		701	2,312	3,393	5,815
	ET (cf)		35	46	47	47
	Infiltration (cf)		666	1,039	1,080	1,108
	Outflow (cf)		0	1,227	2,266	4,660
	Remaining Storage (cf)		0	0	0	0
	Continuity Error (%)		0.00%	0.00%	0.00%	0.00%
	Continuity Check		Okay	Okay	Okay	Okay
	Criteria		NA	Qpost <= 783 cf	NA	NA
	Criteria Met (Y/N)		NA	No	NA	NA
SEDIMENT	Criteria Met (Y/N)		Yes	NA	NA	NA
DEWATER TIME	Surface Water Dewater Time (hr)		8.5	17.2	17.2	17.2
	Criteria		NA	<= 24 hrs	<= 24 hrs	<= 48 hrs
	Criteria Met (Y/N)		Yes	Yes	Yes	Yes
	Complete Drainage Dewater Time (hr)		-24.0	0.1	0.1	0.1
		Criteria	NA	<= 48 hrs	<= 72 hrs	<= 72 hrs
		Criteria Met (Y/N)	Yes	Yes	Yes	Yes

* results are based on a 100-hour simulation

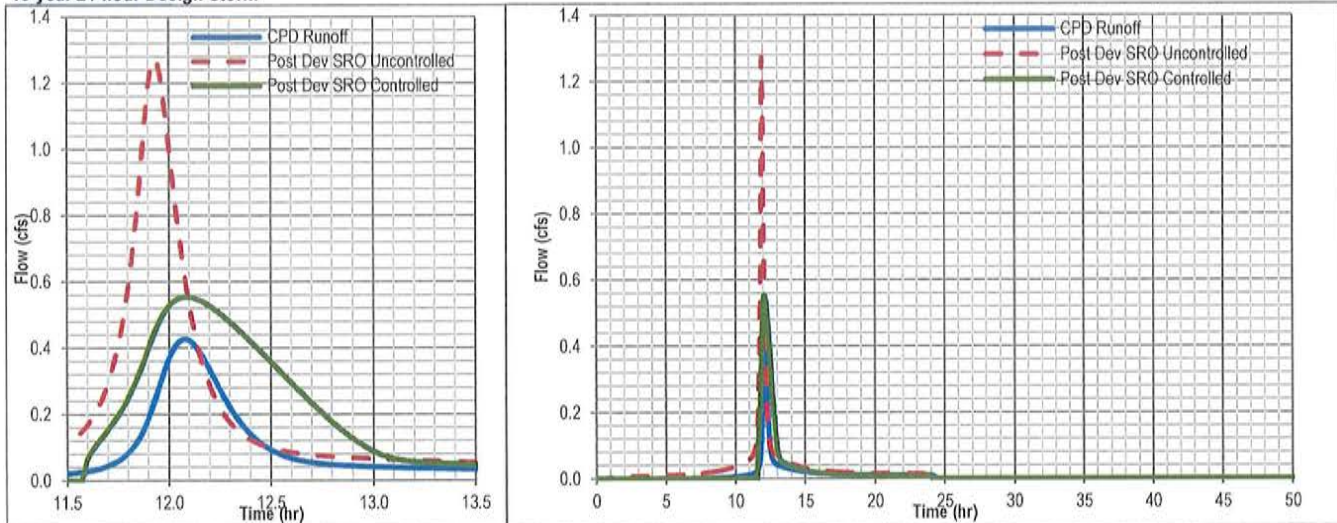
90% Recurrence Interval



2-year 24-hour Design Storm



10-year 24-hour Design Storm



100-year 24-hour Design Storm

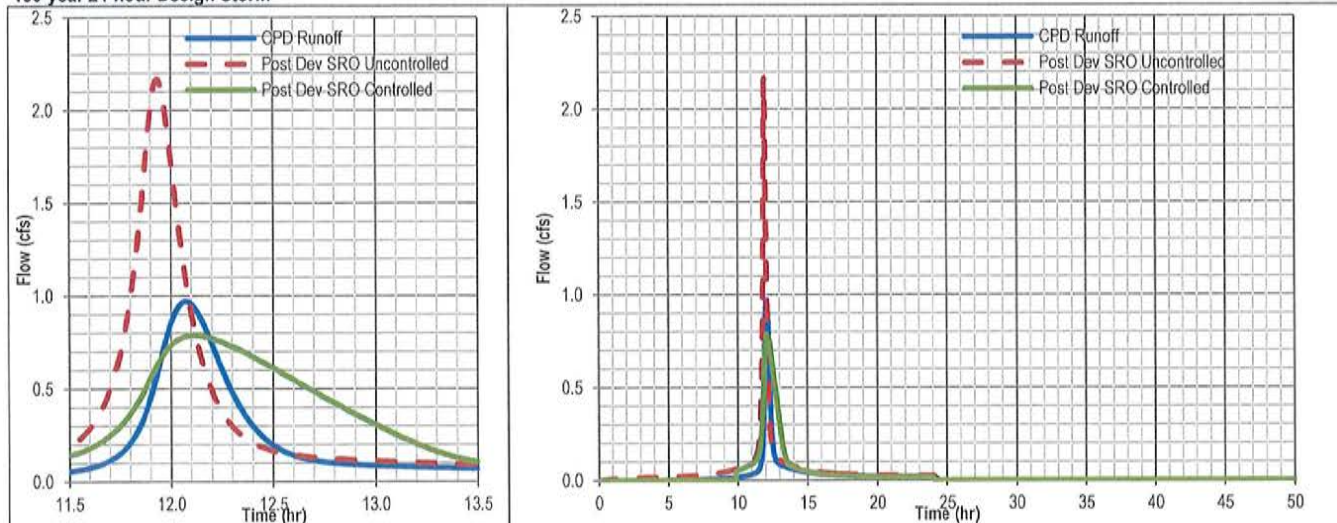


FIGURE 4

Physical Soil Properties---Ingham County, Michigan

Physical Soil Properties—Ingham County, Michigan														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/in	Pct	Pct					
UtB—Urban land-Marlette complex, 2 to 12 percent slopes														
Urban land	—	—	—	—	—	—	—	—	—					
Marlette	0-9	-45-	-41-	10-14- 18	1.50-1.58 -1.65	14.00-28.00-42.00	0.17-0.21-0.24	0.0- 1.5- 2.9	1.0- 2.0- 3.0	.37	.37	5	5	56
	9-15	-45-	-43-	5-12- 18	1.50-1.58 -1.65	14.00-28.00-42.00	0.11-0.16-0.20	0.0- 1.5- 2.9	0.0- 0.3- 0.5	.49	.49			
	15-31	-34-	-37-	25-30- 35	1.50-1.63 -1.75	1.40-2.70-4.00	0.18-0.19-0.20	0.0- 1.5- 2.9	0.0- 0.3- 0.5	.32	.32			
	31-60	-40-	-38-	15-23- 30	1.50-1.63 -1.75	1.40-2.70-4.00	0.12-0.16-0.19	0.0- 1.5- 2.9	0.0- 0.3- 0.5	.37	.37			

Data Source Information

Soil Survey Area: Ingham County, Michigan
Survey Area Data: Version 15, Oct 5, 2017

Average 100 Hectare Rate @ Bottom
proposed detention Basin.

$$\text{Infiltration} = 2.70 \text{ mm/s} \times 0.1417$$
$$= 0.38 \text{ in/hr.}$$

NOAA Atlas 14, Volume 8, Version 2

Location name: Mason, Michigan, USA*

Latitude: 42.589°, Longitude: -84.4599°

Elevation: 904.11 ft**

* source: ESRI Maps

** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffrey Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF tabular | PF graphical | Maps & aeriels

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.296 (0.252-0.350)	0.344 (0.293-0.408)	0.428 (0.362-0.508)	0.501 (0.421-0.597)	0.606 (0.492-0.751)	0.692 (0.546-0.867)	0.782 (0.592-1.00)	0.876 (0.631-1.15)	1.01 (0.693-1.36)	1.11 (0.740-1.52)
10-min	0.433 (0.369-0.512)	0.504 (0.429-0.597)	0.626 (0.530-0.743)	0.733 (0.616-0.874)	0.888 (0.720-1.10)	1.01 (0.799-1.27)	1.15 (0.866-1.47)	1.28 (0.924-1.69)	1.48 (1.01-2.00)	1.63 (1.08-2.23)
15-min	0.528 (0.449-0.625)	0.615 (0.523-0.728)	0.764 (0.647-0.907)	0.894 (0.752-1.07)	1.08 (0.878-1.34)	1.24 (0.974-1.55)	1.40 (1.06-1.79)	1.57 (1.13-2.06)	1.80 (1.24-2.43)	1.98 (1.32-2.72)
30-min	0.746 (0.634-0.882)	0.872 (0.741-1.03)	1.09 (0.921-1.29)	1.27 (1.07-1.52)	1.55 (1.25-1.91)	1.76 (1.39-2.21)	1.99 (1.50-2.55)	2.22 (1.60-2.93)	2.55 (1.75-3.45)	2.81 (1.87-3.84)
60-min	0.929 (0.790-1.10)	1.11 (0.946-1.32)	1.43 (1.21-1.69)	1.70 (1.43-2.02)	2.09 (1.69-2.59)	2.40 (1.89-3.01)	2.73 (2.07-3.50)	3.08 (2.21-4.05)	3.55 (2.44-4.80)	3.92 (2.61-5.37)
2-hr	1.11 (0.954-1.30)	1.35 (1.16-1.59)	1.76 (1.51-2.08)	2.12 (1.80-2.51)	2.63 (2.15-3.24)	3.05 (2.42-3.79)	3.48 (2.65-4.43)	3.93 (2.85-5.13)	4.55 (3.16-6.10)	5.04 (3.39-6.84)
3-hr	1.21 (1.05-1.42)	1.49 (1.28-1.74)	1.96 (1.68-2.30)	2.38 (2.02-2.79)	2.98 (2.45-3.64)	3.46 (2.77-4.29)	3.97 (3.05-5.03)	4.51 (3.30-5.87)	5.25 (3.67-7.02)	5.84 (3.95-7.89)
6-hr	1.46 (1.27-1.69)	1.75 (1.52-2.03)	2.27 (1.96-2.63)	2.73 (2.35-3.18)	3.42 (2.85-4.17)	3.99 (3.23-4.92)	4.60 (3.57-5.81)	5.25 (3.89-6.80)	6.17 (4.37-8.20)	6.91 (4.73-9.26)
12-hr	1.81 (1.59-2.07)	2.06 (1.81-2.37)	2.54 (2.21-2.92)	2.98 (2.59-3.45)	3.67 (3.10-4.46)	4.26 (3.49-5.23)	4.91 (3.86-6.16)	5.62 (4.21-7.24)	6.64 (4.76-8.78)	7.47 (5.18-9.94)
24-hr	2.15 (1.90-2.44)	2.41 (2.13-2.74)	2.89 (2.55-3.30)	3.35 (2.93-3.84)	4.07 (3.47-4.90)	4.69 (3.88-5.70)	5.36 (4.26-6.68)	6.11 (4.64-7.81)	7.19 (5.22-9.43)	8.08 (5.66-10.7)
2-day	2.42 (2.16-2.73)	2.77 (2.47-3.12)	3.40 (3.01-3.84)	3.96 (3.49-4.49)	4.80 (4.11-5.69)	5.50 (4.58-6.60)	6.25 (5.01-7.68)	7.06 (5.40-8.91)	8.21 (6.01-10.6)	9.13 (6.46-11.9)
3-day	2.65 (2.38-2.97)	3.02 (2.71-3.39)	3.67 (3.28-4.13)	4.26 (3.78-4.81)	5.14 (4.43-6.07)	5.88 (4.93-7.02)	6.67 (5.37-8.15)	7.52 (5.78-9.44)	8.71 (6.42-11.2)	9.68 (6.90-12.6)
4-day	2.86 (2.58-3.19)	3.23 (2.90-3.61)	3.89 (3.48-4.35)	4.49 (3.99-5.05)	5.39 (4.66-6.33)	6.14 (5.17-7.30)	6.95 (5.63-8.47)	7.82 (6.05-9.79)	9.06 (6.71-11.7)	10.1 (7.21-13.1)

Westside Builders

Project: City Limits

Basin Desc: Detention (SURFACE STORAGE FOR NEW PARKING AREA)

Contour Elevation	Contour (sq. ft)	Depth (ft)	Incremental Volume Conic (cu. ft.)	Cumulative Volume Conic (cu. ft.)
903.5	1,006.64	N/A	N/A	0
903.6	1,063.52	0.1	103.49	103.49
903.7	1,161.34	0.1	111.21	214.7
903.8	1,258.54	0.1	120.96	335.66
2 YR PONDING 903.9	1,355.17	0.1	130.66	466.32
904	1,451.24	0.1	140.29	606.61
10 YR PONDING 904.1	1,546.65	0.1	149.87	756.48
904.2	1,641.55	0.1	159.39	915.87
904.3	1,736.08	0.1	168.86	1084.73
904.4	1,829.56	0.1	178.26	1262.99
100 YR PONDING 904.5	1,923.54	0.1	187.64	1450.62
904.6	2,069.47	0.1	199.61	1650.23
904.7	2,279.53	0.1	217.37	1867.6
904.8	2,555.77	0.1	241.63	2109.23
904.9	2,890.46	0.1	272.14	2381.37
905	3,303.26	0.1	309.46	2690.83
905.1	3,809.96	0.1	355.36	3046.19
905.2	4,410.60	0.1	410.66	3456.85
905.3	5,116.05	0.1	475.9	3932.74
905.4	5,929.78	0.1	551.79	4484.54
905.5	6,854.06	0.1	638.63	5123.17
→ 905.6	7,856.53	0.1	734.96	5858.13

ELEVATION OF BASIN OVERFLOW
AT SOUTH WEST CORNER OF
BASIN.



CLIENT NAME WESTSIDE BUILDER JOB NAME CITY LIMITS
 SUBJECT DISCHARGE VELOCITY TO REAR SIDE DITCH PG 1/1
 COMPUTED BY KEL DATE 1/16/2019 CHK. BY _____ DATE _____

PROBLEM:

COMPUTE VELOCITY FROM PROPOSED SURFACE
 DETENTION TO MEET REAR SIDE DITCH

SOLUTION:

THE PROPOSED PIPE IS AN 8'-INCH PIPE
 AT SLOPE = 0.47%

FOR MANNING:

$$V_{FULL PIPE} = \frac{1.49}{n} R^{2/3} S^{1/2}$$

$$n = 0.013$$

$$R = D/4$$

$$S = 0.0047$$

$$V_F = 2.38 \text{ fps}$$

$$Q_{FULL} = V_F \cdot A$$

$$= 0.83 \text{ cfs}$$

$$\text{Proposed } 2\text{yr } Q = 0.4 \text{ cfs}$$

$$10\text{yr } Q = 0.55 \text{ cfs}$$

$$100\text{yr } Q = 0.79 \text{ cfs}$$

∴ ALL PROPOSED VELOCITY WILL BE
 LESS THAN 2.38 FPS.

**DRAINAGE DESIGN CHECKLIST
FOR ACCESSING STATE TRUNKLINES****INSTRUCTION: ALL FIELDS SHALL BE COMPLETED BY THE APPLICANT.**

This checklist provides the required information necessary for MDOT review of drainage connections within MDOT right of way (ROW). MDOT's Drainage Manual (DM) should be used as the primary reference for hydrologic and hydraulic calculations and can be found at: <http://www.michigan.gov/stormwatermgt>. MDOT will not accept drainage connections from properties that do not naturally drain to the MDOT ROW.

Base Information (Provide all)

- ☒ Contour map of existing and proposed conditions
- ☒ Hydrologic analysis of existing and proposed conditions (Rational or modified rational methods are not acceptable for determining volume.)
- ☒ Plans of proposed storm water conveyance system
- ☒ Outlet control details
- ☒ Connection details to MDOT system
- ☒ Hydraulic design calculation
- ☒ Certification Statement (Signed by a Michigan Registered Professional Engineer.)

Information for Detention/Retention Basins

- ☒ Elevation vs storage table or curve
- ☐ Elevation vs discharge table or curve
- ☐ Soil boring information showing groundwater elevations, permeability tests shall be performed for infiltration basins

Flood Routing Method (Choose one. Required for sites with detention and/or retention.)

- ☐ NRCS TR55
- ☐ TR20
- ☐ Modified Puls Method
- ☐ HEC-1
- ☐ Other CITY OF LANSING SITE DEVELOPMENT STORMWATER TOOL

Notes:

- ✓ 1. Program must use a hydrograph to calculate volume.
- 2. The rational or modified rational methods are not acceptable for flood routing.

Additional Information (Provide all that apply)

- ☐ Public Drainage Easement(s)
(Required when multiple properties share the proposed drainage system)
- ☐ NPDES Storm Water Industrial Permit (Certificate of Coverage)
(Required when storm water discharge associated with industrial activities defined by 40 CFR 122.25(b)(14)).
- ☐ Energy Dissipation details to control outlet velocities
(Required when proposed velocity is greater than 6 fps)
- ☐ Outlet shut off details for water quality purposes
(Required when the possibility for a potentially hazardous material spillage exists)
- ☐ Local Requirements
(Required when either flows or storage volumes are more restrictive than MDOT's requirements. Meeting local requirements does not necessarily indicate MDOT requirements have been met.)
- ☒ Digital copy of modeling program
(Required when computer application is used)
- ☒ Input and output reports in .pdf format for the range of flows
(Required when computer application is used)

Water Quality

- ☒ Applicant verifies that the discharge to MDOT's stormwater system will not cause a violation of MDOT's National Pollution Discharge Elimination System stormwater discharge permit.

Data Summary

FOR THE COMBINED EXISTING PARKING (DRAINS TO SOUTH END PARKING LOT)
AND PROPOSED PARKING LOT EXPANSION (DRAIN TO MDOT ROADSIDE DITCH
IN GOOSE STREET)

Frequency	Existing flow to MDOT ROW		Proposed flow to MDOT ROW						
			Without detention			With required detention***			
	Discharge (cfs)	Run off Volume (cft)	Discharge (cfs)	Velocity * (ft/s)	Run off Volume (cft)	Discharge (cfs)	Velocity (ft/s) <small>SEE Velocity Analysis FOR BASIN DISCHARGE VELOCITY</small>	Required Storage Volume** (cft)	Water Surface Elevation (ft)
10-year Storm Event 2	2.73	7381			7,335	2.71	NA	(46)	903.9
50-year Storm Event 10	3.95	10,861			11,049	3.84	NA	188	904.1
100-year Storm Event Harmful Interference Evaluation	6.05	18,672			19,263	6.18	NA	591	904.5
Drainage Area (Acres)	1.20 Ac								
Design Storage Volume (cft)						1,450			

* Not applicable (N/A) if "sheet flow" into MDOT right of Way, or detention is proposed.

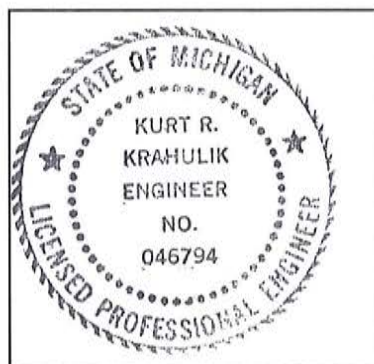
** Difference in volume between the proposed and existing conditions.

i.e. Required Storage Volume = Proposed Volume - Existing Volume, or (N/A) if Proposed Volume <= Existing Volume

*** Not required if proposed discharge is less than or equal to the existing discharge without detention.

Certification

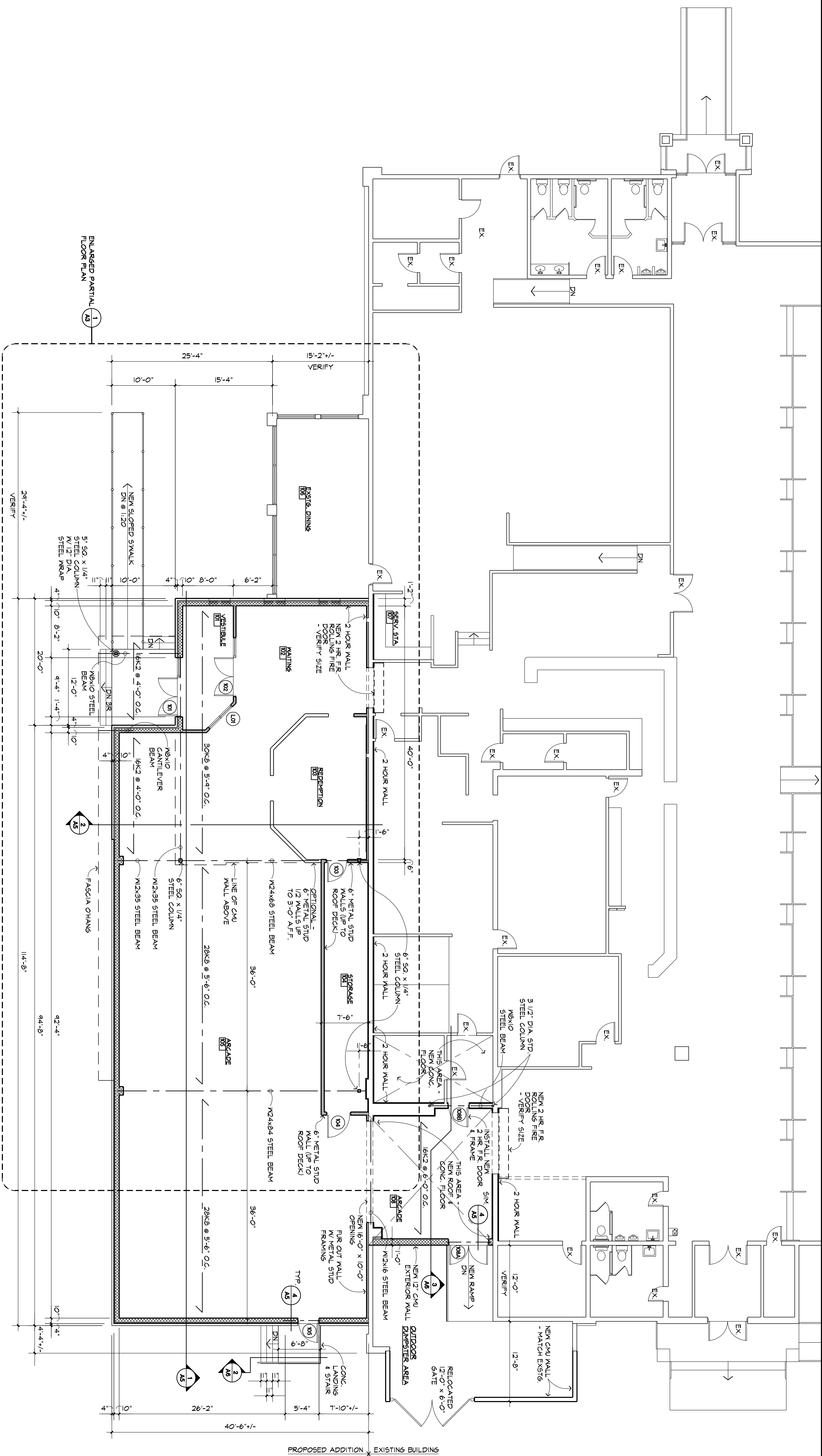
I (print your name) Kurt R. Krahulik, P.E., have prepared the attached plans and specifications for the proposed drainage system. The proposed outlet control from this drainage system is discharged at a flow rate equal to or less than the existing flow rate conditions into the MDOT stormwater conveyance system; the velocity discharged is properly dissipated; there exists sufficient storage on the permit applicant's property for all the range of flows summarized above, so that no harmful interference to MDOT ROW or adjacent properties will be caused as a result of utilizing this facility. This discharge to MDOT's stormwater system will not cause a violation of MDOT's National Pollution Discharge Elimination System stormwater discharge permit.



Signature: Kurt Krahulik, P.E.

Michigan Professional Engineer License Number: 6201046794

This document shall be sealed in the space provided to the left and submitted with the permit package.



NOTE:
VERIFY THAT EXSTG.
WALLS COMMON TO
ADDITION ARE MIN.
8" CMU -
IF A BEARING WALL,
INSTALL NEW CMU
AS REQD.
IF NON-BEARING,
CONSTRUCT OR MODIFY
EXSTG. PER DETAIL 4/A6

$$|1/8\rangle = |1^-\rangle$$

sheet
A2
of 6

paul d. barbour
& associates p.c.

9617 columbia hwy
eaton rapids, mi 48827
517 663 0088

PROPOSED ADDITION & REMODELING FOR:

CITY LIMITS

801 CEDAR ST., MASON, MI 48854

BUILDING NOTES :		A3	A2
USE GROUP :			
TYPE OF CONSTRUCTION :		2B	
ALLOWABLE AREA - ADDN		9,500 SQ. FT.	
PROPOSED AREA :		30,660 SQ. FT.	
EXISTING BUILDING :		4,840 SQ. FT.	
PROPOSED ADDITION :		35,000 SQ. FT.	
TOTAL AREA :		55 FEET, 10" TO 2 STS	
ALLOWABLE HEIGHT :		20 FEET, 1" STOREY	
ACTUAL HEIGHT :			
OCCUPANCY - EXIST'G :			
BOWLING :			
REST LOUNGE :			
KITCHEN :			
OCCUPANCY - EXIST'G :		TOTAL = 250	
OCCUPANCY - PROPOSED :			
ARCADE :			
MAINTING :		MAX. 40 MACHINES @	
OCCUPANCY - PROPOSED :		201 SQ. FT. @ 1 EA.	
TOTAL :		TOTAL = 104	
EXITS REQUIRED - EXIST'G :		2	
EXITS REQUIRED - PROPOSED :		2	
EXITS PROVIDED :		2	
NOTE:			
ALL INTERIOR FINISHES TO COMPLY W/ TABLE 205.4			

STRUCTURAL NOTES :	
A. CODES & STANDARDS :	D. CONCRETE :
<p>BUILDING CODE</p> <p>ALSC</p> <p>ACI</p> <p>ACI 308-SP-15</p> <p>SDI Design Manual</p>	<p>FOUNDATION SLAB</p> <p>3500 psi (28 day comp. strength) 4,000 psi (28 day comp. strength)</p>
<p>DESIGN LOADS :</p> <p>SICKN</p> <p>WIND SPEED</p> <p>MINI-SPREAD</p> <p>EXPOSURE</p> <p>SEISMIC ZONE</p>	<p>Aggregate to cement shall be such as to produce a dense workable mass with a 3 inch maximum slump which can be placed without segregation or excess free surface water. Water curing shall be used. Air entrain of concrete with 5% to 6% air by volume.</p> <p>Mixing and placing of all concrete and selection of materials shall be in accordance with ASTM C150-95A, C419-95A, C494-95A, C566-95A, C594-95A, and ACI Code 304-95.</p> <p>Mixing and placing of all concrete and selection of materials shall be in accordance with ACI Code 302-94 (guide for concrete repair and slab construction), ACI Code 304-94, and as specified by the building official.</p>
<p>B-1. MINID LOADS</p> <p>P = 6.0 Q.09.1 = 0.12 x 0.8 x 126 x 1 P = 1.25 Psf</p> <p>Diagonal bracing is to be provided in column bays & roof trusses.</p>	<p>REINFORCING STEEL</p> <p>All reinforcing steel shall be determined per ASTM A615 Grade 40 or Grade 60 and comply with the following bars 40 bar diameter, 1"-6" minimum, unless otherwise noted.</p>
<p>C. SOIL DESIGN :</p> <p>DESIGN BEARING CAPACITY</p> <p>(Soil test is required prior to placing concrete)</p>	<p>Place reinforcing steel in accordance with the ACI Manual of Standard Practice of Detailing Reinforced Concrete Structures.</p> <p>COVER TO MAIN REINFORCEMENT SHALL BE :</p> <p>FOUNDATIONS</p> <p>SLAB5 - 6"x6 2.5x2.5</p> <p>Top Surface</p> <p>Bottom Surface</p>
	<p>2000 P.S.F. ASSUMED</p> <p>2 inches</p> <p>3 inches</p> <p>1 1/2 inches</p> <p>2 inches</p>

drawn
DMB
checked
PDB

revisions
2-18-19
3-8-19
4-10-19

commission
1811
issued
10-30-18

Architectural elevation drawing of a building facade. The drawing shows a long, low structure with a curved roofline on the left side. The facade is composed of several materials and structural elements:

- PAINT EXSTG. METAL**: Indicated by arrows pointing to the upper curved section of the facade.
- 1" DIA. METAL ROD, TURNBUCKLE & BRACKETS**: Indicated by arrows pointing to vertical rods connecting the upper and lower sections of the facade.
- CMU VENEER**: Indicated by arrows pointing to the grid-patterned masonry sections on the left and right sides.
- FLTS. OR SMOOTH METAL PANELS**: Indicated by an arrow pointing to the central section of the facade.
- CORRUGATED GALV. STEEL**: Indicated by an arrow pointing to the lower right section of the facade.
- CMU VENEER**: Indicated by an arrow pointing to the lower left section of the facade.

The drawing includes two north arrows, one pointing towards the top right and another pointing towards the bottom right. The overall style is a technical architectural line drawing.

Architectural elevation drawing of a building facade. The drawing includes the following labels and dimensions:

- 8'-0"**: Dimension indicating the height of a section of the wall.
- CORRUGATED GALV STEEL**: Label pointing to the upper section of the wall.
- CMU VENEER**: Label pointing to the grid-patterned section of the wall.
- 6" x 6" EAVESTROUGH**: Label pointing to a horizontal feature on the roofline.
- STANDARD CMU**: Label pointing to the brick-patterned section of the wall.
- 4" x 6" DOWNSPOUT**: Label pointing to a vertical feature on the wall.
- RELOCATED GATE**: Label pointing to a gate structure on the right side of the drawing.

3'-4" x 3'-4" MAS. OPENINGS
W/ TH. BRK. ALUM. FRAMES
4 1" INSUL. GLAZING—

8-0

—

()

revisions
2-18-19
3-8-19
4-10-19

commission
||8||
issued
|0-30-18

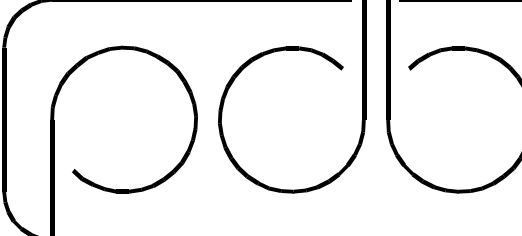
drawn
DMB
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PDB

sheet
A3
of 6

paul d. barbour
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PROPOSED ADDITION & REMODELING FOR:
CITY LIMITS
801 CEDAR ST., MASON, MI 48854

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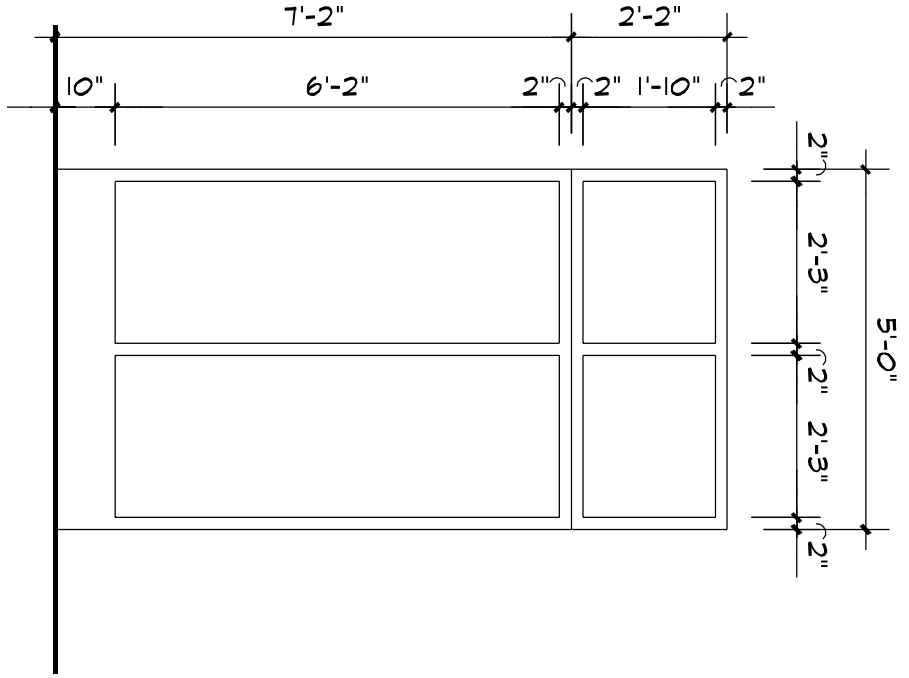


ROOM FINISH SCHEDULE						
NO.	ROOM NAME	WALLS			FLOOR	CEILING
		N	E	S	W	MAT'L BASE
						MAT. HGT.
101	VESTIBULE	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.
102	WAITING	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
103	RECEPTION	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
104	STORAGE	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
105	ARCADE	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
106	EXSTG. DINING	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
107	SERV. STATION	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL
108	ARCADE	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINT GYF. BD.	PAINTED STEEL

- NOTES:
- VERIFY ALL FINISHES W/ OWNER.
 - INTERIOR FINISHES TO COMPLY W/ TABLE 203.4.
 - GROUT & SEALER TO COMPLY W/ HEALTH DEPT. REQUIREMENTS.
 - INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 PER TIA 2.
 - PROVIDE & INSTALL TRANSITION STRIPS AT DOOR OPENINGS AS REQD FOR CHANGE IN MATERIAL.

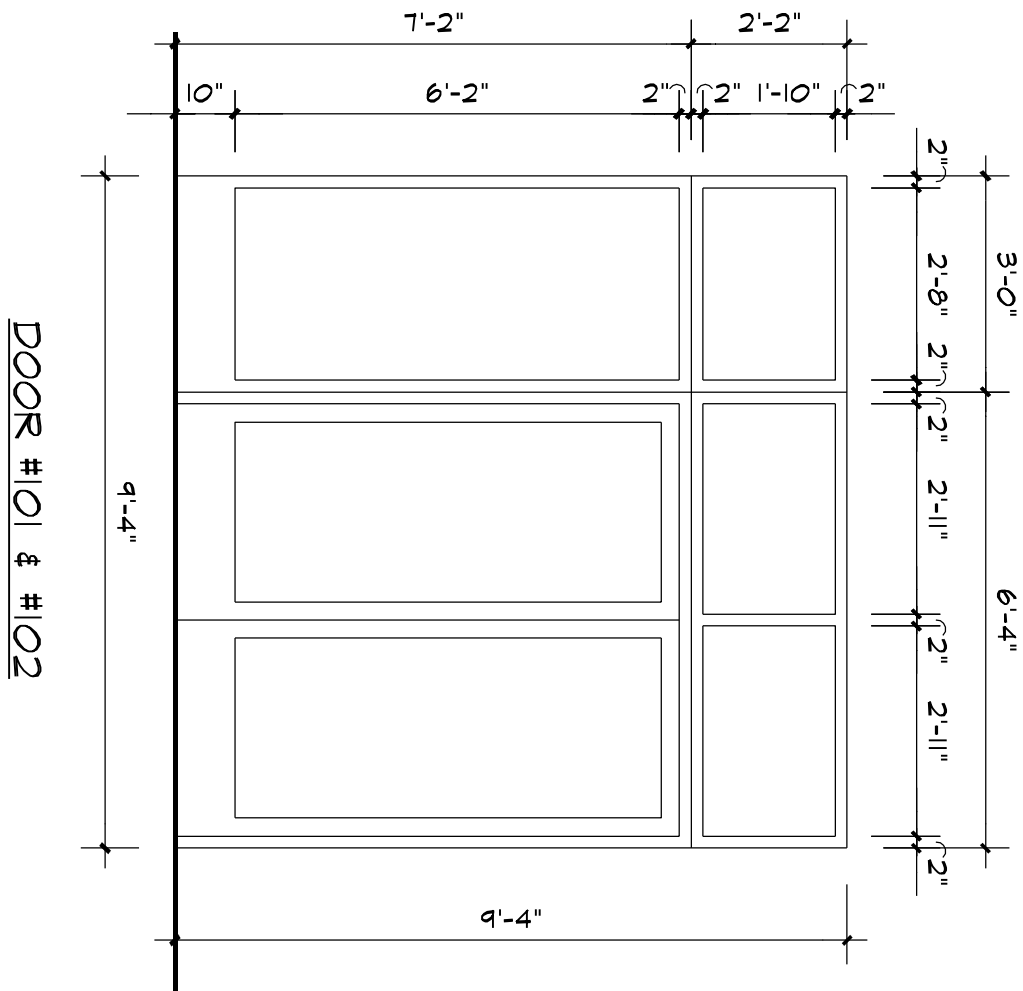
DOOR SCHEDULE				
NO.	SIZE	DR. MAT.	FR. MAT.	HARDWARE
101	PAR 3'-0" X 7'-0" W/ FULL & SIDE LITE	ALUMINUM/GLASS	ALUMINUM	LOCKSET/DEADBOLT w/ PANIC*
102	PAR 3'-0" X 7'-0" W/ FULL & SIDE LITE	ALUMINUM/GLASS	ALUMINUM	LOCKSET/DEADBOLT w/ PANIC
103	3'-0" X 7'-0"	HOLLOW METAL	RED METAL FRAME	LOCKSET
104	3'-6" X 7'-0"	HOLLOW METAL	RED METAL FRAME	LOCKSET
105	3'-0" X 7'-0"	HOLLOW METAL	HOLLOW METAL	LOCKSET/DEADBOLT w/ PANIC*
106A	PAR 3'-0" X 7'-0"	HOLLOW METAL	HOLLOW METAL	LOCKSET/DEADBOLT w/ PANIC
106B	3'-0" X 7'-0" - 2 HOUR FIRE RATED	HOLLOW METAL	RED METAL FRAME	PASSAGE

- * OPTION - PANIC HARDWARE OR A SIGN IS REQUIRED ON THE EGRESS SIDE OF THIS DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED". THE SIGN SHALL BE IN LETTERS 1" HIGH ON A CONTRASTING BACKGROUND, COMPLYING W/ IBC 1006.1.9.3 NOTES.
- CONTRACTOR TO VERIFY WALL THICKNESSES AND COORDINATE DOOR FRAMES.
- ALL DOOR HARDWARE TO COMPLY W/ A.D.A. & MICH. B.F. REQTS.

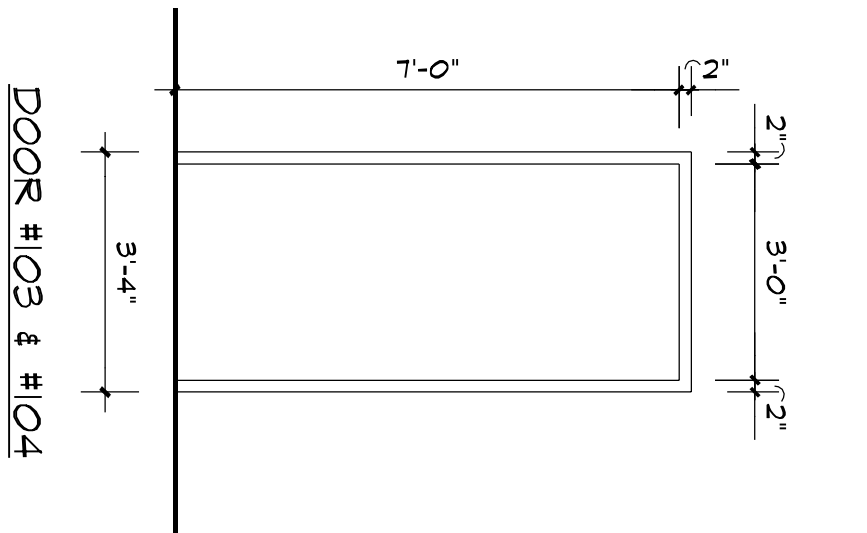


LITE #101

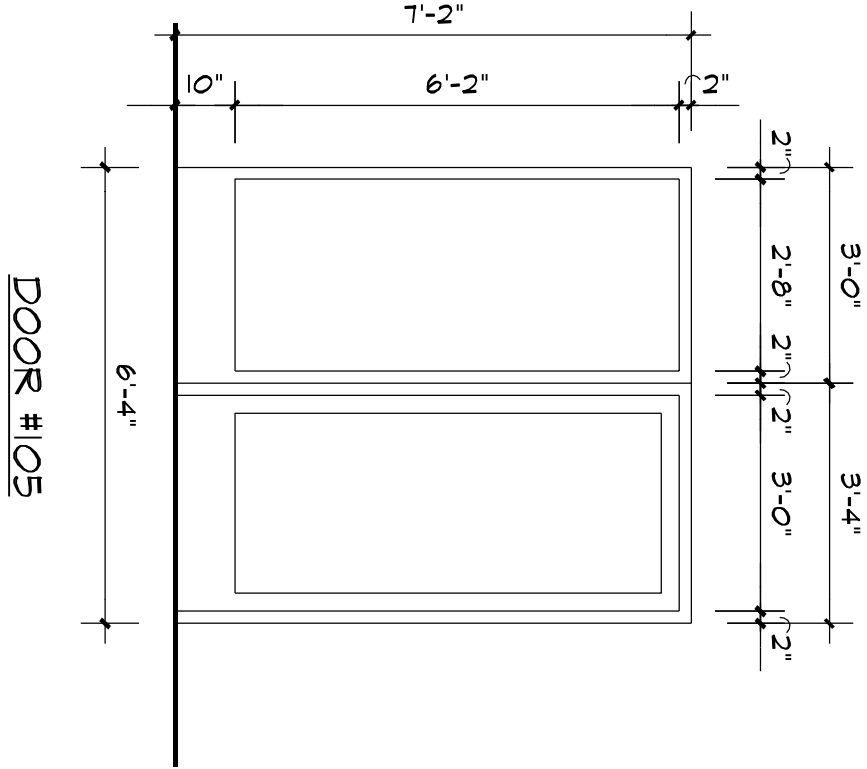
LITE ELEVATIONS 3/8" = 1'-0"



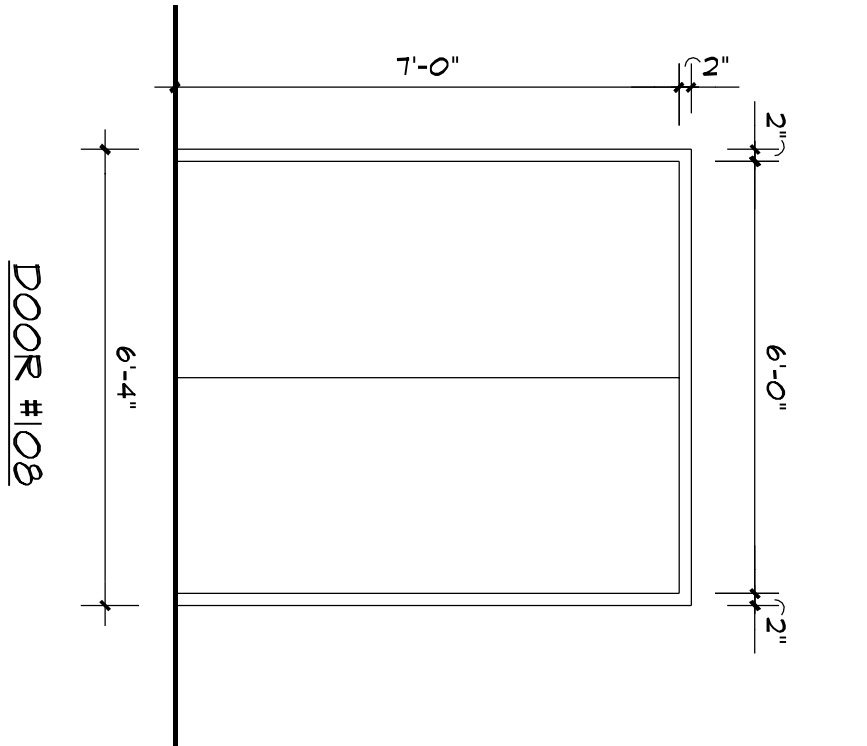
DOOR #101 & #102



DOOR #103 & #104



DOOR #105



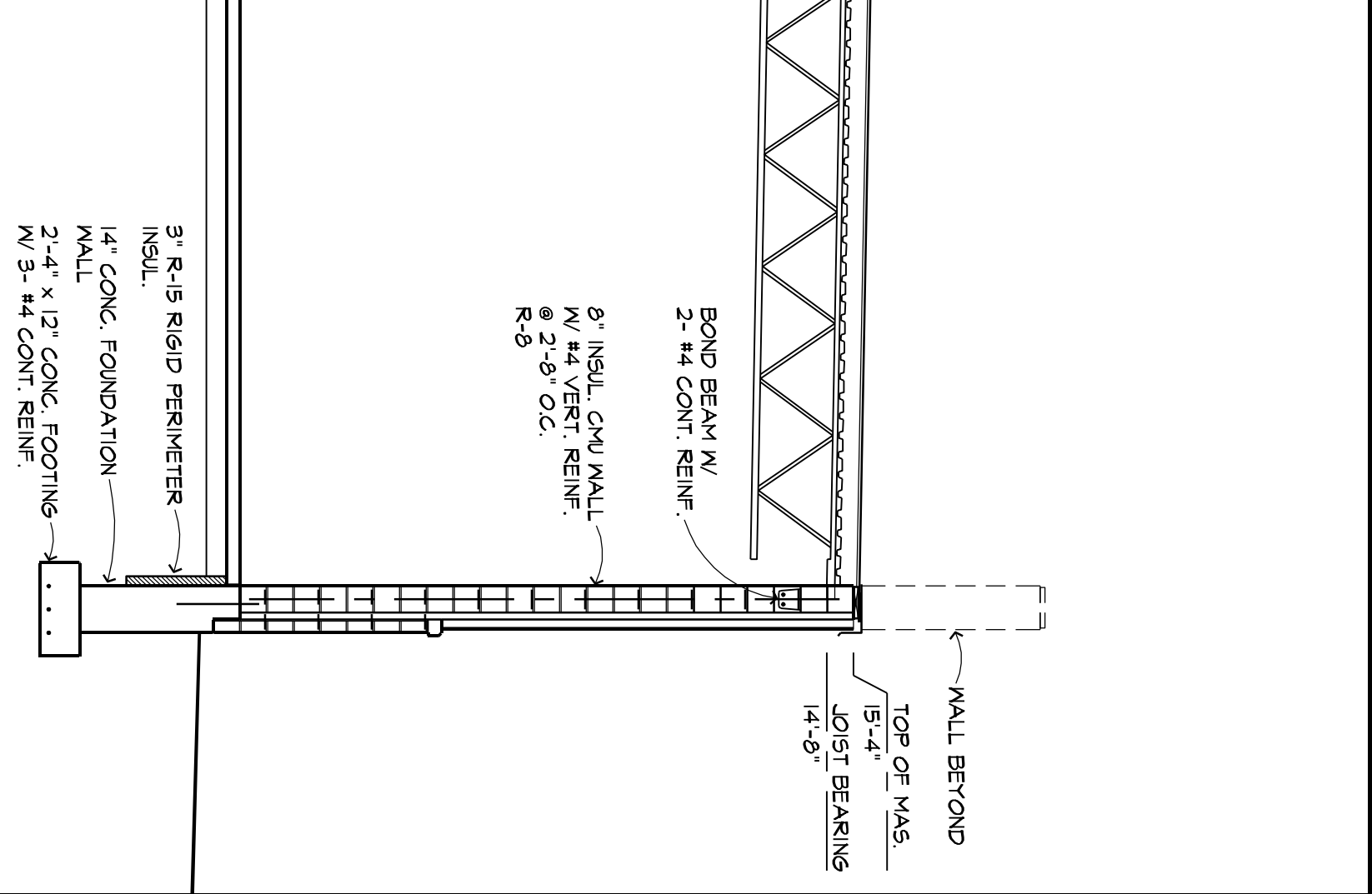
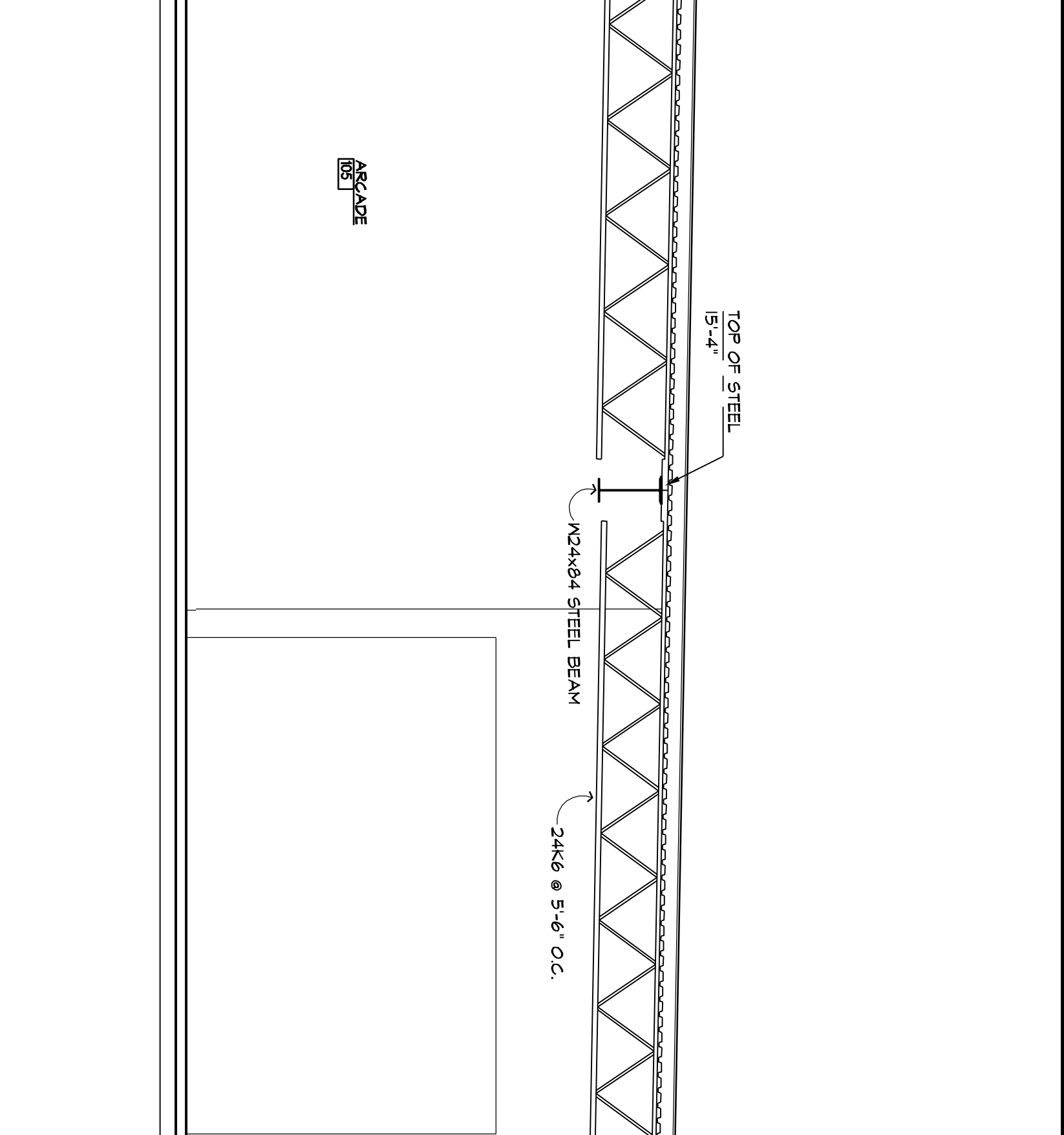
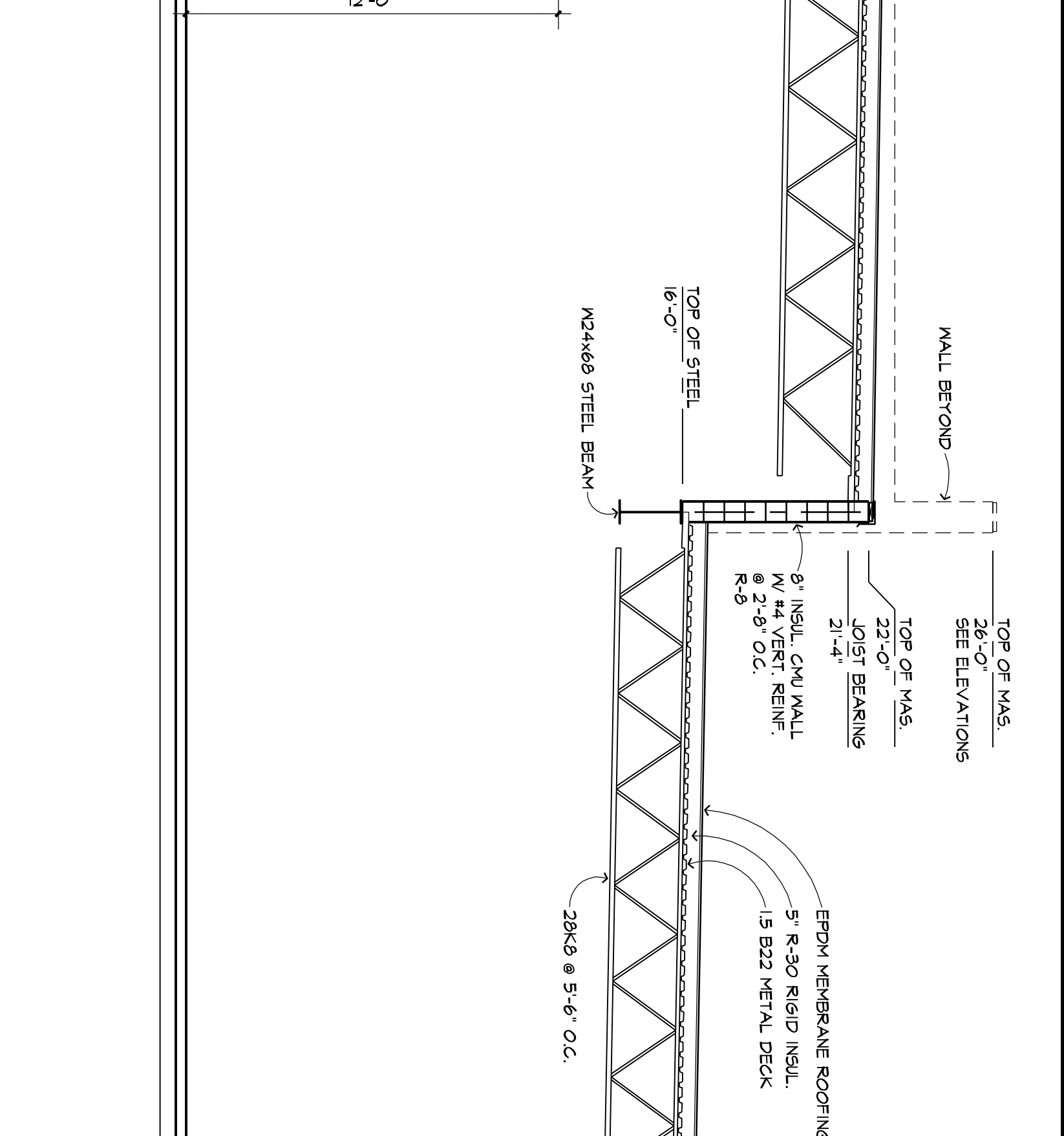
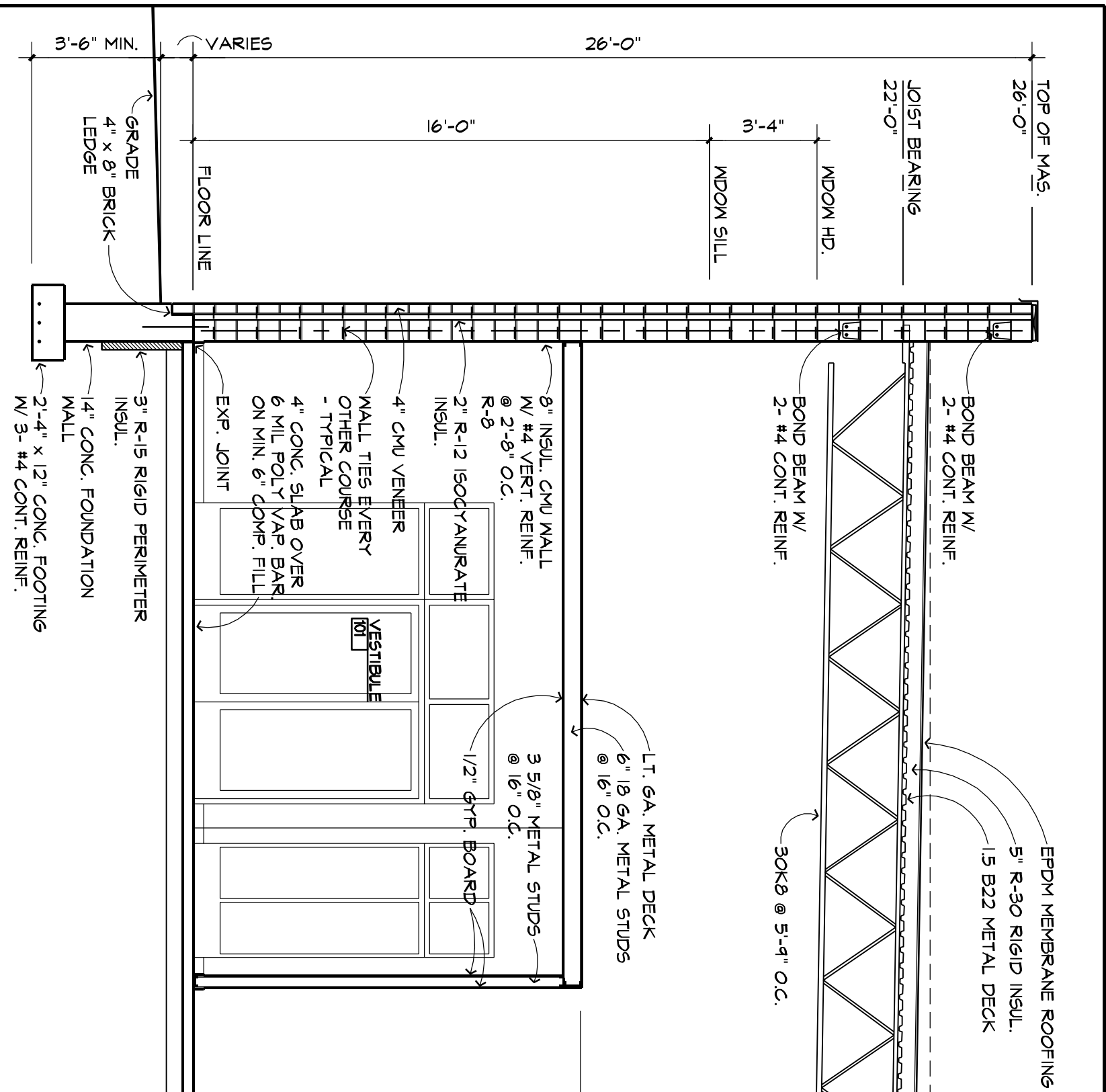
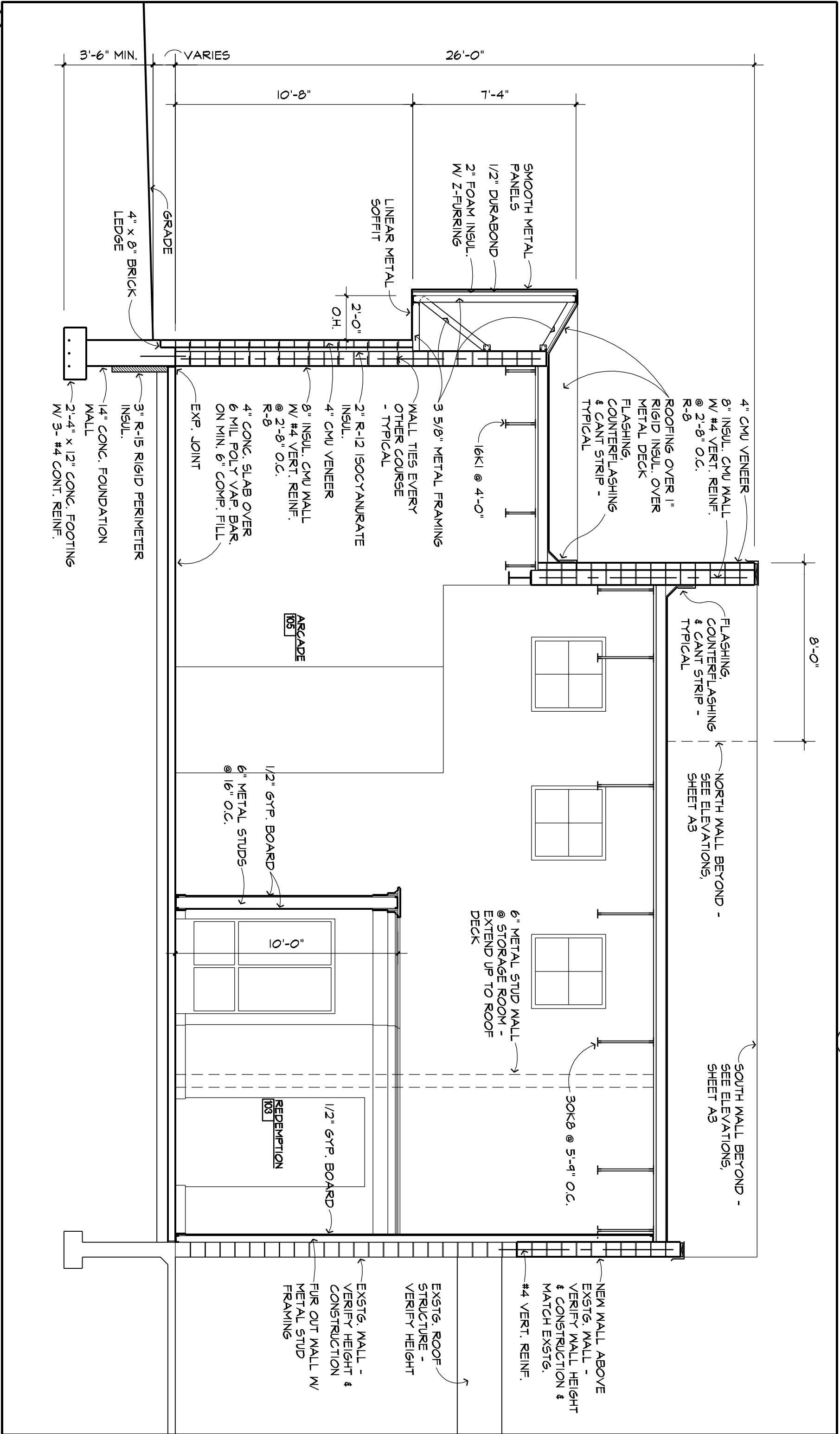
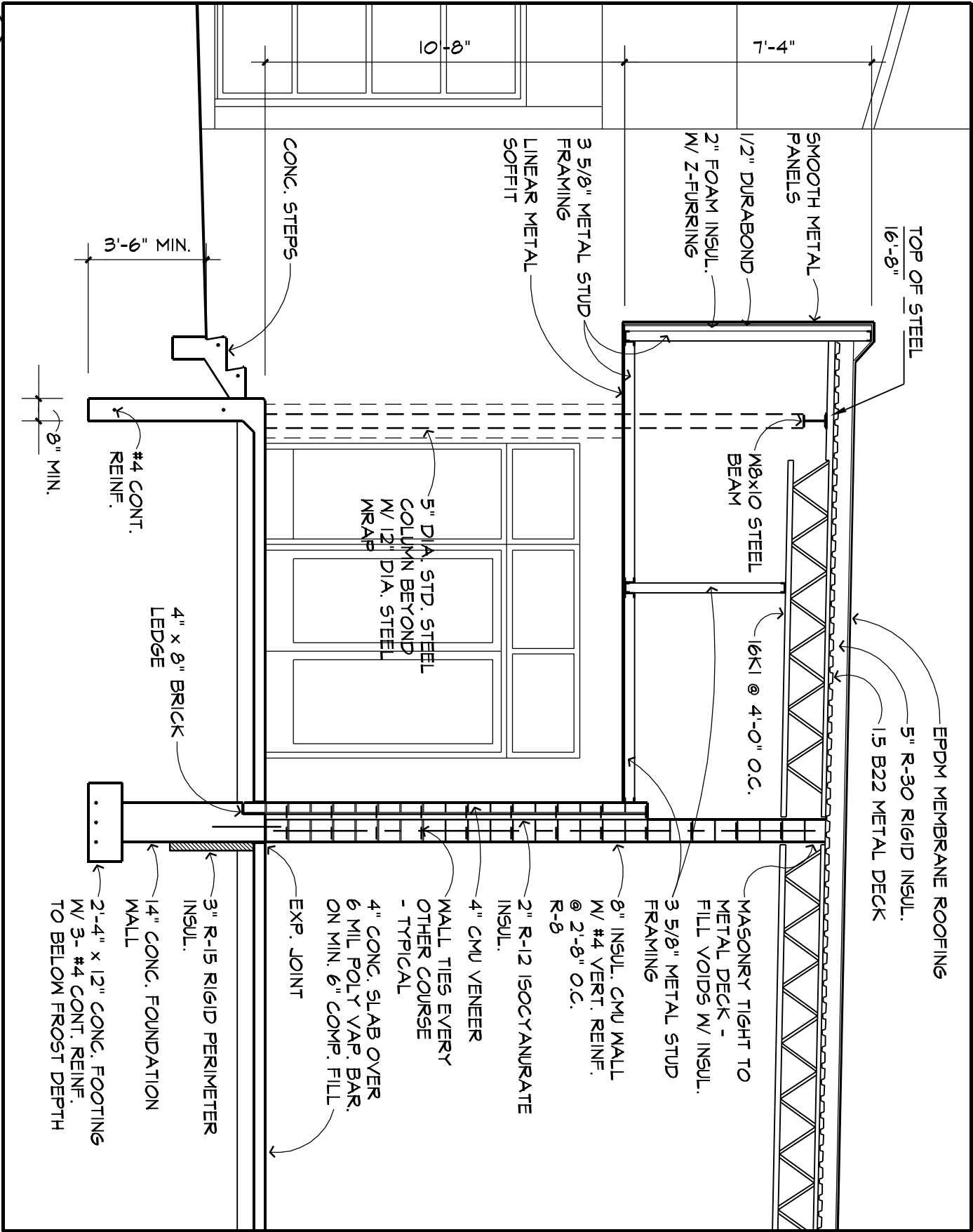
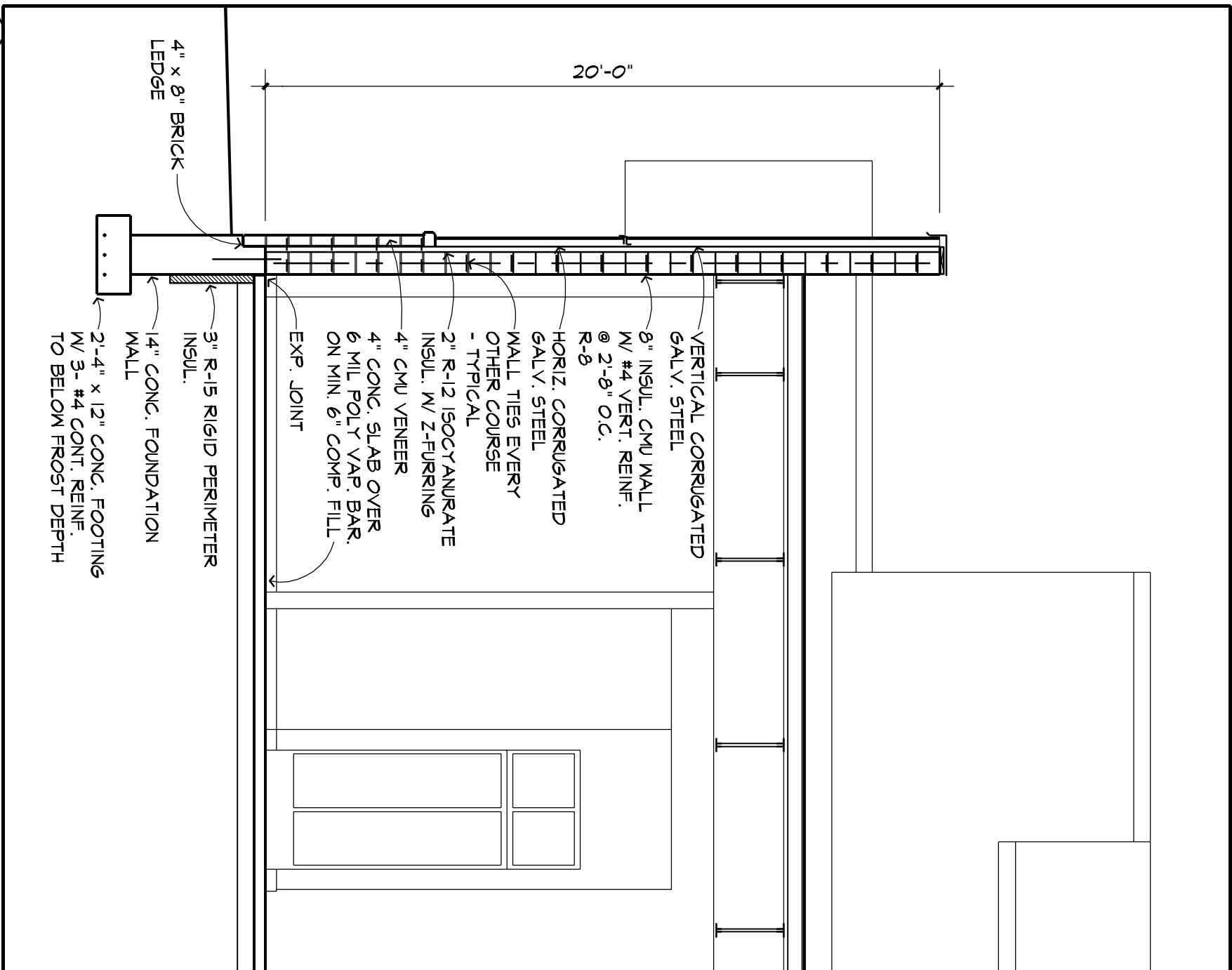
DOOR #106

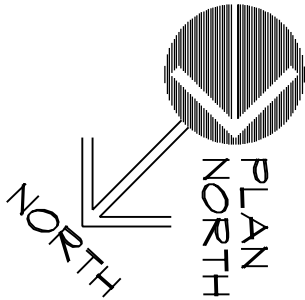
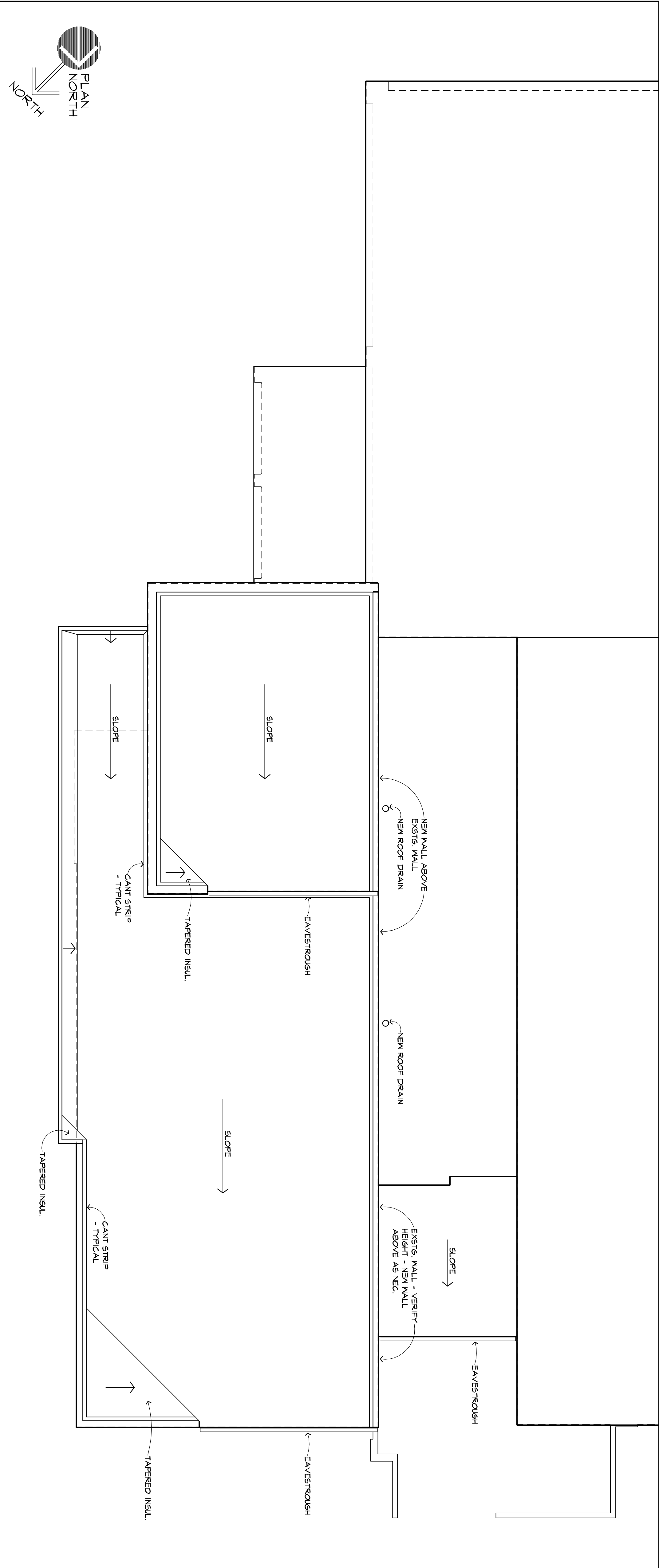
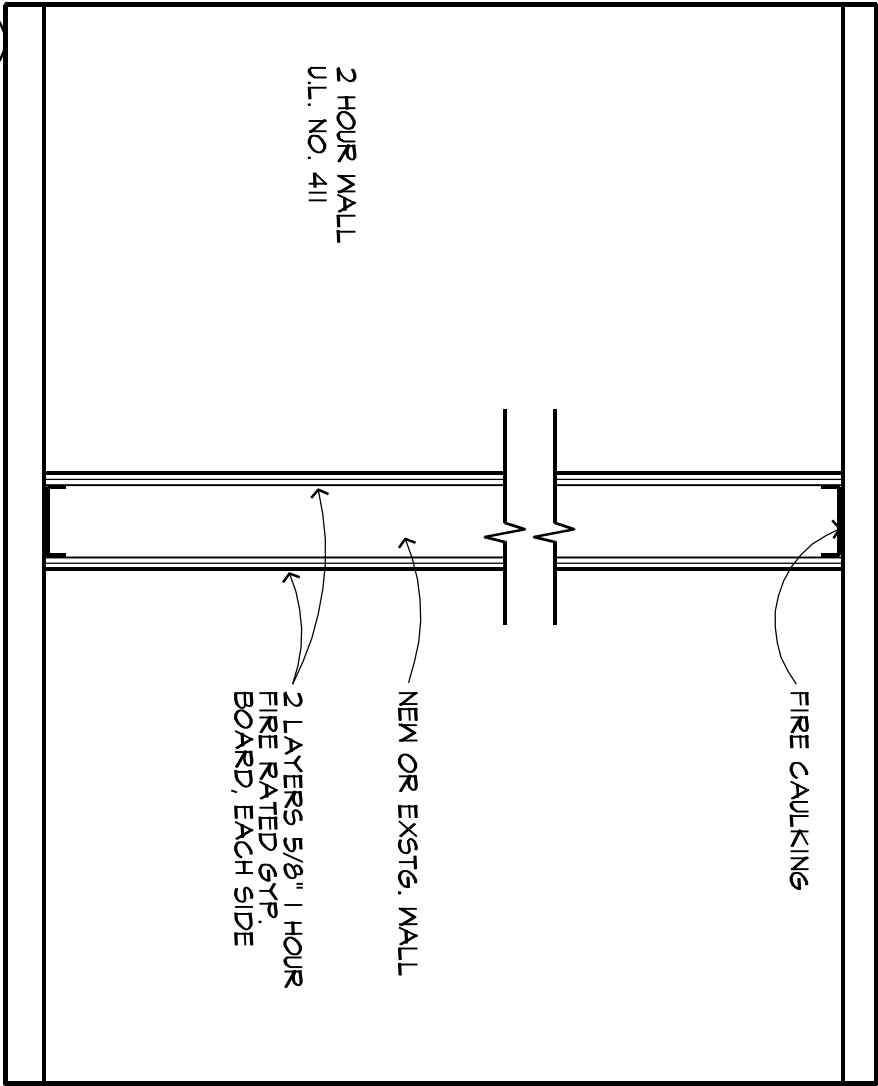
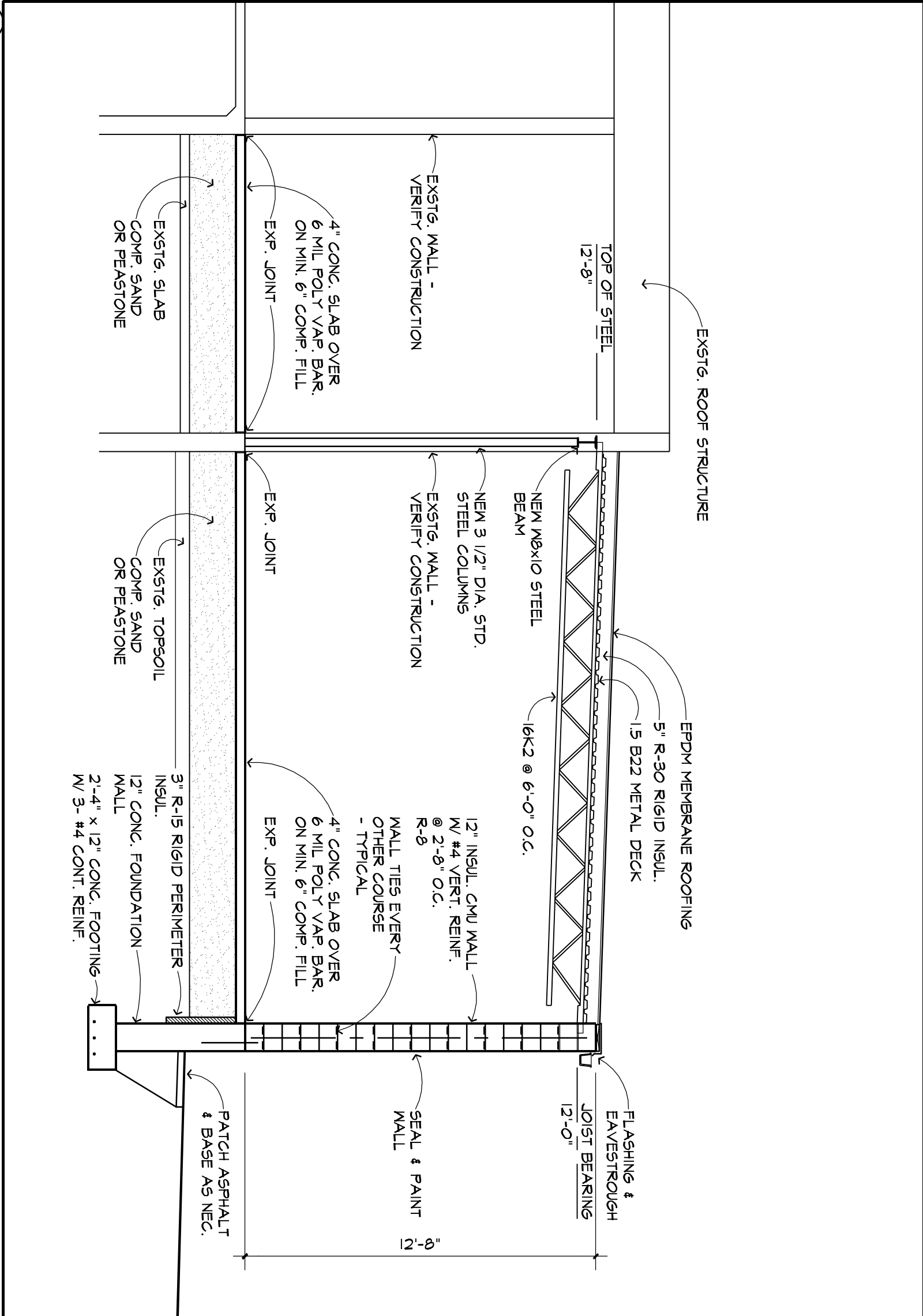
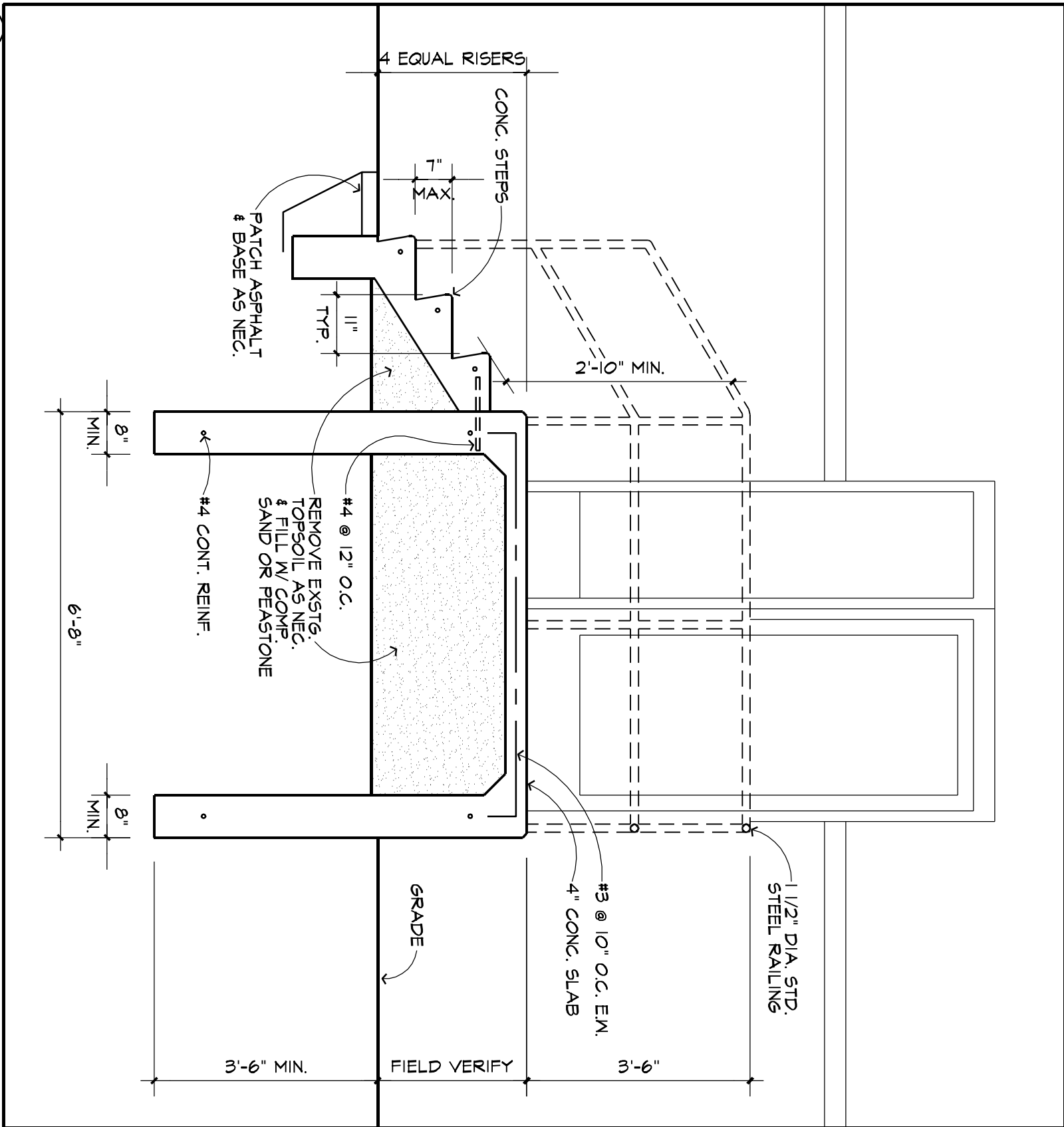
DOOR ELEVATIONS

3/8" = 1'-0"

8" INSUL. CMU MALL
R-8
2" R-12 ISOCYANURATE
INSUL.
CORRUGATED GALV.
STEEL SIDING OR 4"
CMU VENEER
3- 3 1/2" x 3 1/2" x 1/4"
STEEL L's

4) TYP. HEADER DETAIL 1" = 1'-0"





Patrick E. Lindemann

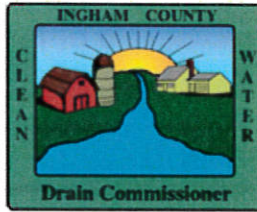
Ingham County Drain Commissioner

PO Box 220
707 Buhl Avenue
Mason, MI 48854-0220

Phone: (517) 676-8395

Fax: (517) 676-8364

<http://dr.ingham.org>



Carla Florence Clos
Deputy Drain Commissioner

Paul C. Pratt
Deputy Drain Commissioner

David C. Love
Chief of Engineering and Inspection

Sheldon Lewis
Administrative Assistant

March 1, 2019

Elizabeth Hude, Zoning & Development Director
Mason City Hall
201 West Ash Street
P.O. Box 370
Mason, MI 48854

RE: Request for public comment – 801 N. Cedar, Mason
City Limits – 2019 Building and Parking Addition
Conceptual Plan Review; Drain Office #19018

Dear Ms. Hude:

We are in receipt of a February 19, 2019 request by the City of Mason for review of a proposed request for comment for an addition to the City Limits facility on the west side of Cedar Street.

This conceptual review is offered as a courtesy to the City of Mason only and should not be construed by the project owner or others as formal submission to the Ingham County Drain Commissioner for site plan or drainage review.

The Ingham County Drain Commissioner (ICDC) offers the City of Mason the following conceptual review comments on the stormwater system for this project:

1. Site drainage from most of the property, except a small portion along Cedar Street, goes primarily to an open ditch area along the east side of the US-127 highway. The ditch water flows westerly across the highway through a culvert to a private ditch that becomes the Ocobock Drain, an enclosed County Drain nested in the Aurelius and Vevay Drain Drainage District.
2. A smaller portion of the drainage from the front of the property goes to an MDOT ditch on the west side of Cedar Street that flows westerly to the MDOT pipe along the east side of US-127.
3. A Permit must be obtained from MDOT for permission to flow an additional volume across the US-127 highway.
4. **The plans must be submitted to the Drain Commissioner's Office for Site Plan and Drainage Review and approval and for Soil Erosion Control Permit evaluation.** Fees and application are found on the Ingham County Drain Commissioner's web site.

We appreciate the opportunity to comment on this plan. It is an honor and a privilege to serve you and the other businesses, citizens and municipalities of Ingham County.

Sincerely,

A handwritten signature in blue ink, appearing to read "David C. Love". The signature is fluid and cursive, with the first name "David" and last name "Love" clearly distinguishable.

David C. Love
Ingham County Drain Engineer

cc: Jim Cicorelli, Leisure Tyme, LLC
Kurt Krahulik, P.E., DC Engineering



City of Mason Planning Commission *Staff Report*

TO: Planning Commission
FROM: Elizabeth A. Hude, AICP - Community Development Director
SUBJECT: Site Plan Review – 118 W. Oak St.
DATE: May 9, 2019

David Meredith, WCH LLC, has requested Final Site Plan approval for the change of use on the first floor of an existing building located at 118 W. Oak St, formerly known as the old school administration building. The first floor will include the existing Food Bank and proposed new use of space as an arcade and an escape room. The second floor will remain as office space.

City Council adopted Ordinance 226 on March 18, 2019 which re-zoned the parcel from an O1 Office District to C-1 (Central Business District). The building is also located within the Historic District. Section 94-222 states that any use within the C-1 zoning district requires final site plan review. Staff finds that the proposed arcade and escape room are commercial indoor recreational uses consistent with the type of use allowed by right in Sec. 94-141 (13) Public assembly buildings, indoor theaters, and auditoriums.

Further, the proposed uses meet the City's Master Plan Objective #4 for Commercial Development – *Encourage commercial development in the downtown area to be of a retail, office and entertainment character to draw people and improve economic vitality.*

The new use does increase the number of required off-street parking spaces by more than two, which triggers the need for Planning Commission review per Sec. 94-223(2). Otherwise, as a use allowed by right with no expansion of the building footprint, this would have qualified for Administrative approval.

No changes are currently proposed to the exterior of the building and therefore Historic District Commission (HDC) approval is not required at this time. If the exterior of the building is cleaned, painted, architecturally modified including lighting, or if a sign is proposed, the work will be subject to the requirements of Chapter 31 – Historic Preservation and/or Chapter 58 – Signs.

LAND USE/ZONING/MASTER PLAN:

The site is located and fronts on West Oak Street, a local roadway. The surrounding land uses and zoning are as follows:

	Current Land Use	Zoning	Future Land Use
North	Commercial	C-1 (Central Business District)	Commercial
East	Commercial	C-1 (Central Business District)	Commercial
South	Residential	RM (Multiple Family Residential District)	Residential
West	Residential	O1 Office District	Residential

SITE PLAN REVIEW:

The following sections address compliance with site plan requirements. The following comments are provided based upon the plan dated April 16, 2019.

Height, Bulk, Density, and Area Requirements:

As no changes to the structure footprint are proposed, the plan appears to meet the building height, setbacks and lot coverage site development standards listed in Section 94-121(c) and Table 100-1.

Circulation, Loading and Off-Street Parking

Circulation

The proposed building is adequately served by infrastructure that supports the safe and orderly circulation of motorized and non-motorized traffic - it fronts onto a three-lane public right of way supporting two lanes for bi-directional traffic, one lane of angled on-street parking and a sidewalk. CATA route #46 is available on Jefferson St.

Loading

There shall be no requirement of loading or unloading space in the C-1 district for property with direct access to an alley. (§94-293(c))

The site currently has direct access to an alley and therefore is exempt from the loading space requirement.

Off-Street Parking

§94-292(h)(1) Uses in the C-1 district states that there shall be no off-street parking space requirements in the C-1 district for those uses which require 20 or less off-street parking spaces. Uses requiring more than 20 off-street parking spaces shall have their parking requirement determined by the planning commission. In making such a decision, the planning commission shall consider the availability of both public and private parking spaces.

Based upon the requirements of Table 100-5 Parking space requirements, 62 parking spaces are required to support the existing and proposed uses in the development. A minimum of one of the parking spaces is to be barrier free in accordance with the Americans with Disabilities Act (ADA). This is detailed in the parking calculation (Table 1) below. The applicant is providing ten private parking spaces in the existing parking area. The spaces will meet the minimum standard size of 10'x20' with a minimum 24' travel lane for two-way traffic.

The plan indicates 11 parking spaces, however, the space adjacent to the alley on the north contains a dumpster. Staff recommends approval with the condition that this will be revised on the plan submitted with the building permit. The dumpster is required to be screened in accordance with Sec. 94-173(b).

Staff finds that there appears to be sufficient parking available in the surrounding public lots and on-street spaces to accommodate the proposed uses and recommends that the planning commission modify the number of required spaces to 10 based upon the following facts:

1. A parking study was completed as part of a 2009 Downtown Marketing Analysis by McKenna Associates recommending a calculation of 3.23 for 1,000 sq. ft. of useable floor area. The study states that based upon the total building floor area in downtown, which would take into

consideration the existing site, demand is for 380 spaces total. Factoring in the available private parking lots associated with many of the buildings, this results in a parking surplus of approximately 240% +/- in downtown Mason.

2. The applicant is not increasing the building footprint but instead converting existing usable floor area from office space to an indoor recreation use as an arcade and an escape room.

Table 1 – Parking Requirements

Use	UFA (per applicant)	Parking/UFA	Customer Parking Req.	Customer Parking Proposed
First Floor Arcade and Escape Room	3608	1 per 100 sq. ft. UFA in main meeting room or club room	37	Adjacent public lot at City Hall/on-street
First and Second Floor Office	1632 3096		9 16	Adjacent public lot/on-street
Total Required			62	
Allowance for uses in the C-1 District		20	20	
Parking provided on-site			10	
Barrier-free spaces required		1-2	(1)	
UFA = Useable Floor Area				

Landscaping

The site is built to the property line by pre-existing building and parking. While no landscape buffer is required as this is in a C-1 district, there is a requirement for landscaping in off-street parking lots. No additional landscaping is proposed on the lot or in the parking area. There is an existing fence and natural screening on the adjacent residential lot.

Staff recommends granting a waiver from the Sec. 94-241 and specifically Sec. 94-241(i)(1)a.1.

- Off-street parking areas containing six or more parking spaces shall be provided with landscaping in accordance with the following:

1. Six through 50 spaces: One canopy tree and 50 sq. ft. of landscaped area per six spaces.

Signs

The site plan does not propose a new or expanded sign located within the property. If any new signage is to be located on the site it will be subject to the requirements of Chapter 58 of the Zoning Ordinance and Chapter 31 – Historic Preservation.

Site Lighting

No changes proposed. During a site visit staff noted very few lights on the building and that the large floodlight on the west side of the building made a loud buzzing noise. The existing lighting may have been sufficient for office use, primarily a day time use, however, given that the arcade and escape room hours go later into the evening. The police department suggests adding lighting to the building and parking area for safety and security. Lighting changes are subject to Historic District Commission review per Chapter 31 Historic Preservation.

Staff recommends removing the existing flood light and replacing it with one that does not emit noise and is shielded down per the standards for lighting in Sec. 94-177(e). Staff recommends approval with the condition that a lighting plan reflecting updated and additional lighting with photometrics will be submitted with the building permit application and in accordance with Sec. 94-177(e) Light and Sec. 94-227 Standards for site plan review and approval.

Water and Sanitary Sewer

The site is served by city water and sewer. No new services are proposed for this project.

Storm Water Management

No changes proposed.

Agency Comments:

Staff met with Police, Fire and Department of Public Works on April 30.

Police	Add lighting to the building for safety and security
Fire	No concerns; interior to meet State Construction Code for fire suppression and egress
DPW	Fix drain spilling into the right of way on northside of the building, creates unsafe condition including ice in winter; black soot on west side of the building should be addressed. (see pics below)



REVIEW CRITERIA:

It appears that the site and proposed use will comply with the site plan review standards listed in Section 94-227 of the Code.

Site Plan Review Standards Sec. 94-227:

In reviewing an application for site plan review and approval the following standards shall apply:

- (1) *The site shall be developed so that all elements shall be harmoniously and efficiently organized in relation to the size, shape, type and topography of the site and surrounding property.*
- (2) *The site shall be developed so as not to impede the normal and orderly development, improvement, and use of surrounding property for uses permitted in this chapter.*
- (3) *All buildings or groups of buildings shall be arranged to permit emergency vehicle access by some practical means to all sites.*
- (4) *Every structure or dwelling unit shall have direct access to a public street or indirect access to a public street via an approved dedicated private street.*
- (5) *Appropriate measures shall be taken to ensure that the addition or removal of surface waters will not adversely affect neighboring properties that controls are in place to minimize sedimentation*

- and erosion, and that topographic alterations are minimized to accommodate storm water management.*
- (6) Provisions shall be made for the construction of storm sewer facilities including grading, gutters, piping, on-site storage, and treatment of turf as required to handle storm water and prevent erosion.*
 - (7) Secondary containment for above ground areas where hazardous substances are stored or used shall be provided as required by the city fire chief.*
 - (8) Exterior lighting shall be designed and located so that the source of illumination is directed away from adjacent properties, the intensity of lighting is the minimum necessary, and the direction of lighting is downward as much as is possible and appropriate for the project.*
 - (9) All loading and unloading areas, outside storage areas, and refuse receptacles shall be screened from casual view from the public rights-of-way and adjoining land uses.*
 - (10) Site plans shall meet the driveway, traffic safety, and parking standards of the city in such manner as necessary to address the following:*
 - a. Safe and efficient vehicular and non-vehicular circulation, including parking areas, non-motorized linkages to abutting parcels, uses, sidewalks, and trails.*
 - b. Shared driveways and service drives.*
 - c. Adequate and properly located utilities.*
 - (11) Provisions shall be made for proposed common areas and public features to be reasonably maintained.*
 - (12) The site plan submittal shall demonstrate compliance with all applicable requirements of this chapter, chapters 58 and 74, the building code, and county, state, and federal law.*

STAFF RECOMMENDATION:

With the findings and analysis described above, the following action is recommended for consideration by the Planning Commission:

The Planning Commission approve Resolution No. 2019-05.

Attachments:

- 1. Resolution
- 2. Application
- 3. Site Plan

Introduced:
Second:

**CITY OF MASON
PLANNING COMMISSION RESOLUTION No. 2019-05**

APPROVAL OF FINAL SITE PLAN ON PROPERTY LOCATED AT 118 W. OAK

May 14, 2019

WHEREAS, a request has been received from David Meredith to review parking requirements for the intended use of an arcade; and

WHEREAS, the proposal was shown on plans dated March 4, 2019; and

WHEREAS, the subject property is further described as 118 W. Oak; and

WHEREAS, the parcel is zoned C-1 (Central Business District); and

WHEREAS, Section 94-222 states that any use within the C-1 zoning district requires site plan review; and

WHEREAS the Planning Commission accepts the staff report dated May 9, 2019 as finding of fact that with the following waivers and conditions listed herein, the plans will comply with the Final Site Plan Review Standards listed in Section 94-227 of the Mason Code with the following conditions:

- Plans will be revised to reflect 10 on-site parking spaces and a screened dumpster in the northern most space that meets the requirements of Sec. 94-173(b); and
- Plans will be revised to reflect updated and additional lighting on the building in accordance with Sec. 94-177(e) Light and Chapter 31 Historic Preservation; and
- The drain spilling into the right of way will be corrected to the satisfaction of the DPW, Building Official, and Zoning Official; and
- The façade will be cleaned and the source of the black soot corrected to the satisfaction of the DPW, Building Official, and Zoning Official and in accordance with the requirements of Chapter 31 Historic Preservation; and further,
- The Planning Commission finds that as no new parking is being created, the site is adjacent to a landscape buffer to the west, adjacent to two rights of way on the north and south, a parking lot and building to the east, a requirement for additional landscaping is excessive

NOW THEREFORE BE IT BE RESOLVED, that the Mason Planning Commission does hereby approve a Final Site Plan for the change of use on the first floor of an existing building located at 118 W. Oak Street to include an arcade and escape room with the following waivers and conditions:

- Landscaping requirements as stated in Sec. 91-241 are waived; and
- Plans will be revised to reflect 10 on-site parking spaces and a screened dumpster in the northern most space that meets the requirements of Sec. 94-173(b); and
- Plans will be revised to reflect updated and additional lighting on the building in accordance with Sec. 94-177(e) Light and Chapter 31 Historic Preservation; and
- The drain spilling into the right of way will be corrected to the satisfaction of the DPW, Building Official, and Zoning Official; and
- The façade will be cleaned and the source of the black soot corrected to the satisfaction of the DPW, Building Official, and Zoning Official and in accordance with the requirements of Chapter 31 Historic Preservation; and further; and
- The hours of operation will not extend past 9:00 p.m. Monday through Thursday, not past midnight (12:00 a.m.) Friday and Saturday, and not past 8:00 p.m. on Sunday.

Yes ()

No ()

Absent ()

Vacant ()

CLERK'S CERTIFICATION: I hereby certify that the foregoing is a true and accurate copy of a resolution adopted by the Planning Commission at its meeting held Tuesday, May 14, 2019, the original of which is part of the City of Mason Planning Commission minutes.

Sarah J. Jarvis, Clerk
City of Mason
Ingham County, Michigan



APPLICATION – SITE PLAN REVIEW/SPECIAL USE PERMIT

City of Mason

Planning Department • 201 W. Ash Street • Mason, MI 48854

Phone: 517/676-9155 • Fax: 517/676-1330

www.mason.mi.us

Applicant– Please check one of the following:

☐ Preliminary Site Plan Review

☐ Final Site Plan Review

☐ Special Use Permit*

☐ Administrative Review

* includes Preliminary Site Plan Review

PLANNING DEPARTMENT USE ONLY

Application Received: _____

Tax ID: _____

Fee: _____

Receipt #: _____

I. APPLICANT INFORMATION

Name David Meredith

Organization WCH LLC

Address 480 Promec. Dr., Grand Ledge, MI 48837

Telephone Number 517-627-8532 Facsimile Number 517-627-2562

Interest in Property (owner, tenant, option, etc.) Owner

Note: If applicant is anyone other than owner, request must be accompanied by a signed letter of authorization from the owner.

II. PROPERTY INFORMATION

Owner David Meredith Telephone Number 517-627-8532

Property Address 118 W. Oak St., Mason, MI 48854

Legal Description: If in a Subdivision: Subdivision Name _____ Lot Number _____

If Metes and Bounds (can be provided on separate sheet): _____

APPLICANT CERTIFICATION

By execution of this application, the person signing represents that the information provided and the accompanying documentation is, to the best of his/her knowledge, true and accurate. In addition, the person signing represents that he or she is authorized and does hereby grant a right of entry to City officials for the purpose of inspecting the premises and uses thereon to verify compliance with the terms and conditions of any Special Use Permit and/or Site Plan approval issued as a result of this application.

Signature _____ Date 10-01-2018

III. REQUEST DESCRIPTION

A. Written Description – Please use this section to describe the use or uses proposed. Attach additional pages, if necessary.

New tenant would like to have an "Escape Rooms" on the 2nd floor.

An Arcade for kids on the 1st floor while parents are in the Escape Room.

B. Available Services

Public Water ☒ YES ☐ NO
Public Sanitary Sewer ☒ YES ☐ NO

Paved Road (Asphalt or Concrete) ☒ YES ☐ NO
Public Storm Sewer ☐ Not sure ☐ YES ☐ NO

C. Estimate the Following

Traffic Generated Not sure

Total Employees 4-6 Shifts 1st&2nd

Population Increase Not sure

Employees in Peak Shift 2

Hours of Operation See attached spreadsheet PM
day

Total Bldg. Area Proposed see drawings

Parking Spaces Provided see drawings

D. Project Phasing

This project will be completed in: ☒ One Phase ☐ Multiple Phases – Total No. of Phases: _____

Note: The phases of construction for multi-phase projects must be shown on the site plan

IV. APPLICATION MATERIALS

The following are checklists of items that generally must be submitted with applications for Preliminary Review, Final Site Plan Review, and Special Use Permits. Applicants should review Articles VI and VII or Chapter 94 of the Mason Code for a complete listing of application requirements. All site plan drawings must comply with the requirements of Section 94-226(d) of the Zoning Ordinance. Incomplete applications will not be processed.

- ☒ Completed application form
- ☒ 20 copies of site plan drawings is larger than 11" x 17" (30 copies for Special Use Permits)
- ☒ 1 – 11" x 17" copy of the site plan
- ☒ Plans submitted on CD (Commercial only) **Flash Drive**
- ☒ Legal description
- ☒ Proof of ownership/owner authorization
- ☐ Construction schedule for proposed project
- ☐ Construction calculations for utilities
- ☒ Fee (see below)
- ☐ Any other information deemed necessary

Application Fee – all requests must be accompanied by a fee, as established by the City Council. The fee schedule for Preliminary Site Plan Reviews, Final Site Plan Reviews, and Special Use Permits is as follows (As of October 16, 2006):

<u>Administrative Reviews</u>	\$70.00
<u>Preliminary Site Plan Reviews</u>	\$200.00
<u>Final Site Plan Review</u>	\$100.00
<u>Special Use Permits</u> (includes preliminary site plan review)	\$275.00
<u>Engineering Review</u>	\$220.00*

*Two-hour minimum fee for projects increasing demand on public utilities. Actual fees incurred are billed to applicant upon completion of review.

V. APPLICATION DEADLINES

Preliminary Site Plan/Special Use Permit Review – Applications for Preliminary Site Plan Review may be submitted at any time. Complete applications must be received a minimum four (4) weeks prior to a Planning Commission meeting to be placed on the agenda. Upon receipt of a complete application, a public hearing will be scheduled for the next regularly scheduled meeting (for Special Use Permits only). The Planning Commission has the final authority to approve, approve with conditions or deny an application for Preliminary Site Plan/Special Use Permit Review. The Planning Department staff will issue a letter to the applicant advising of any changes or revisions that may be necessary prior to making application for Final Site Plan Review.

Final Site Plan Review – Complete applications must be received a minimum of four (4) weeks prior to a Planning Commission meeting to be placed on an agenda. The Planning Commission has the final authority to approve, approve with conditions or deny an application for Final Site Plan Review. Planning Commission meetings are held on the second Tuesday after the first Monday of every month, unless the Tuesday is a Township recognized holiday, in which case the meeting is held on the following day (Wednesday).

VI. STAFF REPORT

The Planning Department Staff will prepare a report to the Planning Commission regarding an application for Preliminary Site Plan Review, Final Site Plan Review or Special Use Permit. The report will explain the request and review whether it complies with the zoning standards of the Mason Code. Staff will present the findings of that report during the Planning Commission meeting. An applicant who wishes to obtain one (1) copy of that report, at no cost, prior to the meeting must provide a written request to the Planning Department. The report is generally complete on the Friday before the meeting and can be mailed to the applicant or picked up by the applicant in the Planning Department.

CITY OF MASON
P.O. BOX 370
201 W. ASH ST.
MASON MI 48854-370
Phone : (517) 676-9155
WWW.MASON.MI.US

Received From:
WCH OF MICHIGAN
PO BOX 513
GRAND LEDGE MI 48837

Date: 03/05/2019 Time: 3:07:43 PM
Receipt: 100244356
Cashier: KM

118 W OAK
REZONING
ZONING PERMIT - SITE PLAN REVIEW

ITEM REFERENCE	AMOUNT
PERBUS PERMIT-VARIOUS BUS LICENSE & PERMIT S	
REZONING	\$300.00
PERBUS PERMIT-VARIOUS BUS LICENSE & PERMIT S	
ZONING PERMIT - SITE PLAN REV	\$100.00
TOTAL	\$400.00
CHECK 002160	\$300.00
CASH	\$100.00
Total Tendered:	\$400.00
Change:	\$0.00

CITY OF MASON 2018 Summer

MESSAGE TO TAXPAYER

INTEREST ADDED SEPTEMBER 1ST.
POSTMARKS DO NOT COUNT.
CREDIT CARDS ACCEPTED ON OUR WEBSITE
WWW.MASON.MI.US

PLEASE READ REVERSE SIDE OF STATEMENT

PAYMENT INFORMATION

This tax is due by: 08/31/2018

Pay by mail to: CITY OF MASON
PAUL BORLE, TREASURER
201 W. ASH ST. PO BOX 370
MASON, MI 48854-0370

PROPERTY INFORMATION

Property Assessed To:
WCH OF MICHIGAN LLC
480 PRO-MEC DR.
GRAND LEDGE, MI 48837

MASON PUBLIC
School: 33130

Prop #: 33-19-10-08-240-019
Prop Addr: 118 W OAK

Legal Description:
LOTS 7 & 8 BLK 16, SEC 8 T2N R1W CITY OF MASON, INGHAM CO

TAX DETAIL

Taxable Value:	134,501	COMM-IMPROVED
State Equalized Value:	140,010	Class: 201
PRE/MBT %:	0.0000	DDA
		Mort Code:

Taxes are based upon Taxable Value.
1 mill equals \$1.00 per \$1000 of Taxable Value.
Amounts with no millage are either Special
Assessments or other charges added to this bill.

DESCRIPTION	MILLAGE	AMOUNT
CITY TAX	15.25000	2,051.14
INGHAM ISD	5.99870	806.83
L.C.C.	3.80720	512.07
STATE ED FUND	6.00000	807.00
MPS OPERATING	17.93880	2,412.78
COUNTY	6.80000	914.60

Date Received: 7-3-18

GL Account:

CC:

Mgr Initials: *[Signature]*

OPERATING FISCAL YEARS

The taxes on bill will be used for governmental
operations for the following fiscal year(s):

County:	01/01/18 - 12/31/18
Twn/Cty:	07/01/18 - 06/30/19
School:	07/01/18 - 06/30/19
State:	10/01/18 - 09/30/19

Does NOT affect when the tax is due or its amount

Total Tax	55.79470	7,504.42
Administration Fee		54.53
TOTAL AMOUNT DUE		7,558.95

Please detach along perforation. Keep the top portion.



Including Rec Time Arcade
& Escape Ingham County Escape Room

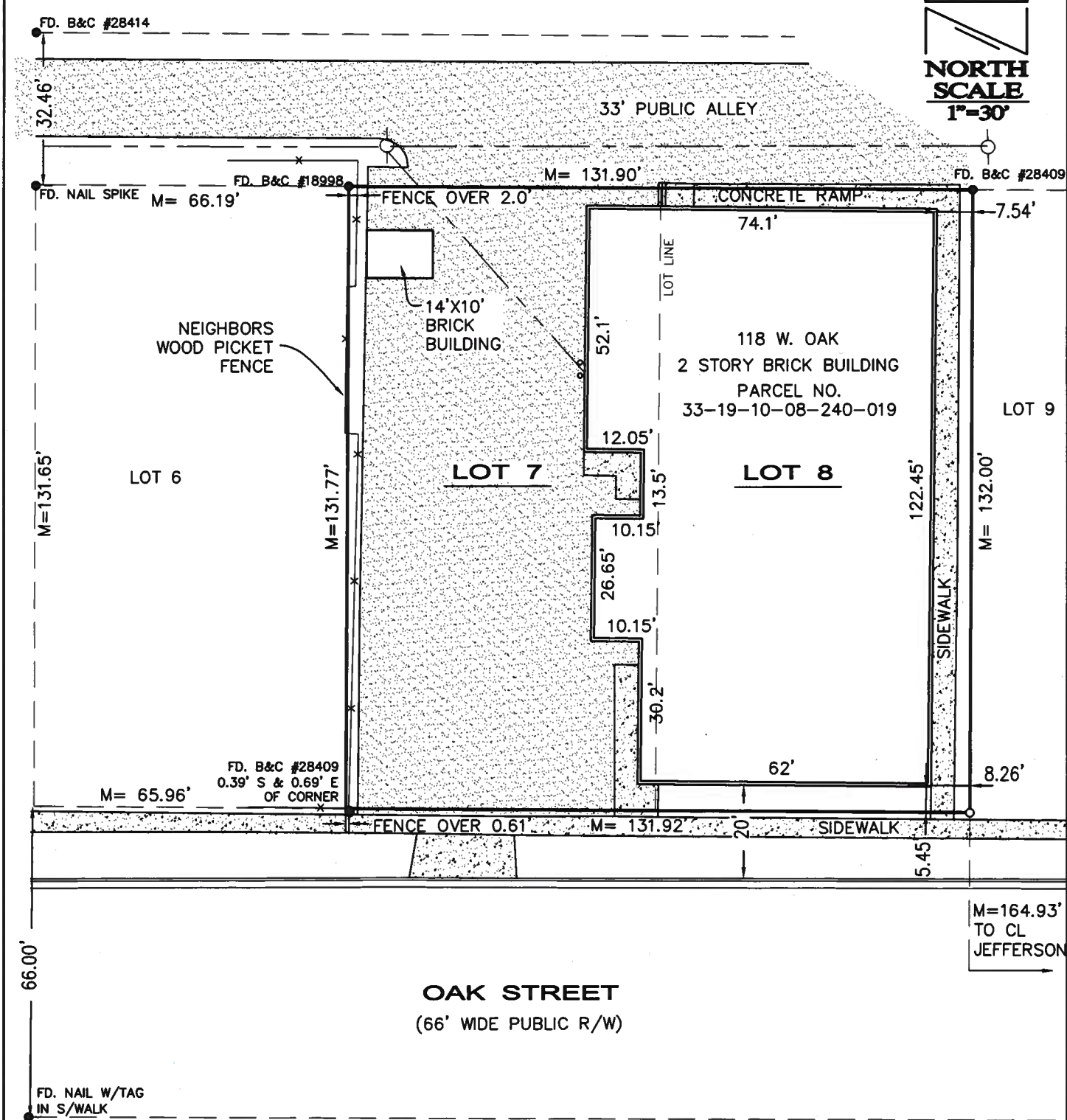
Normal Business Hours

Day	Hours of Operation
Monday - Thursday	2:30pm - 9:00pm
Friday	2:30pm - 12:00am
Saturday	10:00am - 12:00am
Sunday	10:00am - 8:00pm

Holidays, Spring Break, Summer Break

Monday - Thursday	10:00am - 9:00pm
Friday	10:00am - 12:00am
Saturday	10:00am - 12:00am
Sunday	10:00am - 8:00pm

CERTIFIED LOT SURVEY



CERTIFICATION:

I, DARIN L. THELEN, BEING A LICENSE SURVEYOR, HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LOTS HEREON DESCRIBED AND THAT THE RELATIVE POSITIONAL PRECISION OF EACH CORNER IS WITHIN THE LIMITS ACCEPTED BY THE PRACTICE OF PROFESSIONAL SURVEYING AND THAT THIS SURVEY COMPLIES WITH THE REQUIREMENTS OF P.A. 132 OF 1970, AS AMENDED.

NOTES/REFERENCES:

1. A title commitment was not provided for this parcel so the affects of easements or any other encumbrances of record or unknown.

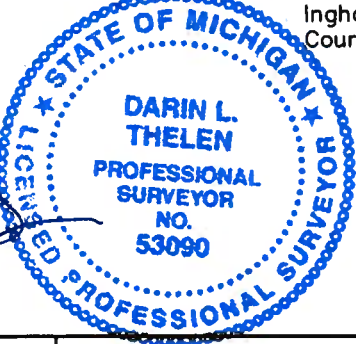
LEGAL DESCRIPTION:

Lots 7 & 8, Block 16, of the original plat of Mason, Ingham County, as recorded in plats of Ingham County Register of Deeds.

LEGEND:

- = PROPERTY BOUNDARY
- x - x - = FENCE LINE
- o = SET NAIL & CAP #53090
- = FOUND PROPERTY CORNER AS NOTED
- (M) = MEASURED BEARING OR DISTANCE
- (R) = RECORDED BEARING OR DISTANCE
- ↗ = DISTANCE NOT TO SCALE

DARIN L. THELEN
PROFESSIONAL SURVEYOR NO. 53090



D. L. THELEN Land Surveying & Mapping, LLC 6025 Claremont Ct. Lansing, MI 48917 (517) 449-8330	FOR: WCH OF MICHIGAN, LLC		PG. 1 OF 1	
	LOCATION: 118 W. OAK, MASON, MI 48854 LOTS 7 & 8, BLOCK 16, CITY OF MASON, INGHAM COUNTY, MICHIGAN			
	DATE: 1-14-19	DRAWN: DLT	CHK'D: DLT	PROJ. NO.: 19-0001

2.0 PROPERTY INFORMATION

2.1 Legal Description of Parcels

The subject site is comprised of two rectangular lots (7 and 8) that form one legal parcel with the following tax identification number: 33-19-08-240-010. The parcel has the following legal description:

Lots 7 and 8 of Block 16, Section 8, Township 2 North, Range 1 West, City of Mason, Ingham County.

2.2 Survey Map Information

Figure 1 is site map that depicts the legal survey property boundaries and tax identification number of the parcel that comprises the subject site. Appendix D contains a plat map that depicts the dimensions of the subject site.

2.3 Site Map and Plan

Figures 2 and 3 are site maps that depict the site structures.

2.4 Area Map

Figure 4 is a site location map that depicts the subject site in relation to the surrounding area.

2.5 Property Address

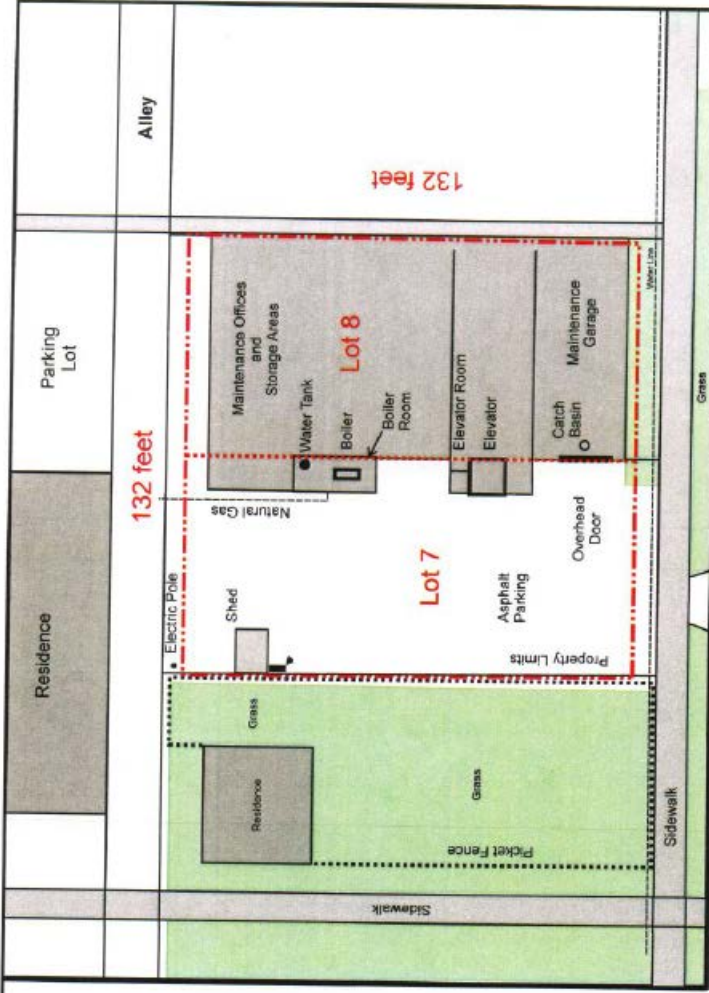
The street address of the subject site is: 118 W. Oak Street, Mason, Michigan 48854.

2.6 Location Information

The subject site sits on the north side of W. Oak Street midway between Jefferson Street (east) and Park Street (west), in the central business district of Mason. The subject site has the coordinates of Township 2 North, Range 1 West, NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 8. The subject site is at latitude **N42.57822°** and longitude **W84.44411°**. The latitude and longitude coordinates were obtained from global positioning system (GPS) and correspond to the entrance to the subject site off of Oak Street.



S. Park Street



W. Oak Street

Parcel ID:33-19-08-240-010

118 W. Oak Street
City of Mason
Ingham County, Michigan

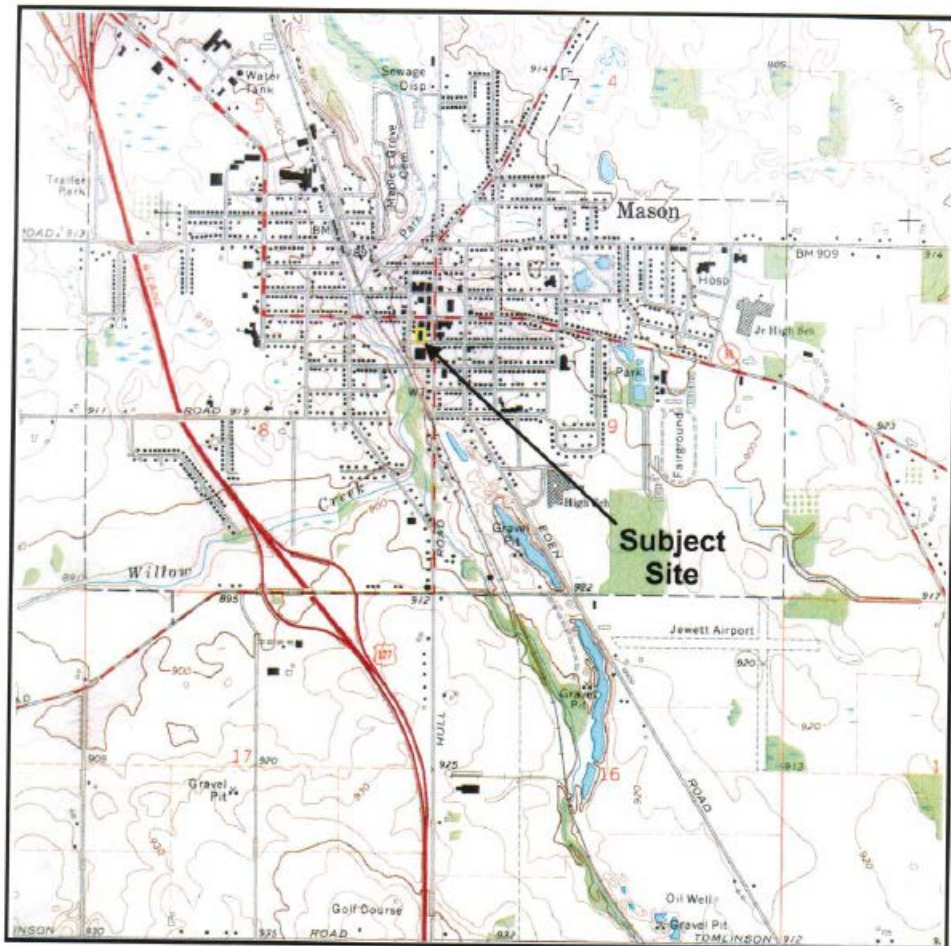
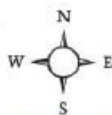


FIGURE 4

ASSESSMENT
Ingham County, Michigan

Site Location Map

Office Building
118 W. Oak Street
Mason, Michigan

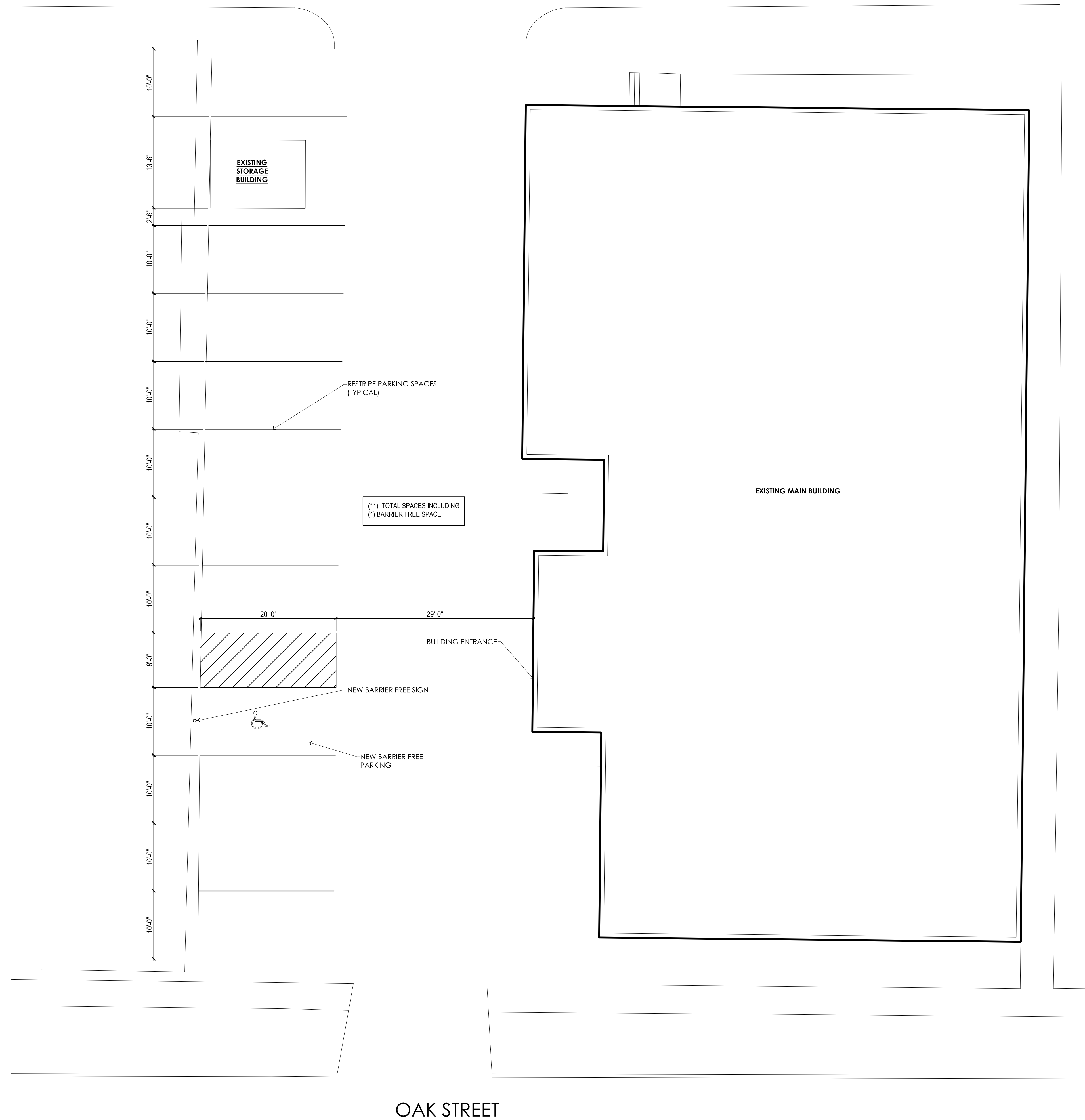


0 1000 2000 3000
1 Inch = 2000 Feet

Adapted from 1970 USGS
Topographic Map
Mason, Michigan Quadrangle
7.5 Minute Series



PUBLIC ALLEY



USE	UFA Square Feet	PROPOSED # Spaces	REQ'D # Spaces
See Parking Sec. 94-292 & Table 100-5			
Use Group (A-3) - Video Arcade, Escape Room - 1 per 100 sq. ft. UFA			
1st Floor	3608		37
Use Group (B) - General Offices - 1 per 200 sq. ft. UFA			
1st Floor	1632		9
2nd Floor	3096		16
Total Parking Spaces		11	62
Accessible Spaces (ADA)		1	

Usable floor area (UFA) means the area used for or intended to be used for the display or sale of merchandise or services, or for use to serve patrons, clients, customers, or occupants. Such floor area which is used or intended to be used for hallways, stairways, elevator shafts, closets, columns, thickness of walls, utility or sanitary facilities shall be excluded from the computation of usable floor area. For office, merchandising, or service uses, those areas used for storage or processing merchandise or where customers, patients, clients and the general public are denied access shall be excluded from the computation of usable floor area.

Measurement of usable floor area shall be the sum of the horizontal areas of each story of a structure measured from the internal faces of the exterior walls.

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

CODE DATA:

USE GROUP:	A-3 & B (FIRST LEVEL)	
	B (SECOND LEVEL)	
CONSTRUCTION TYPE:	5B	
OCCUPANT LOAD	FIRST LEVEL	
	ARCADE (A-3)	186 OCCUPANTS
	ESCAPE ROOM (A-3)	27 OCCUPANTS
	BUSINESS (B)	17 OCCUPANTS
	TOTAL	230 OCCUPANTS
	SECOND LEVEL	
	BUSINESS (B)	31 OCCUPANTS
	TOTAL	31 OCCUPANTS
BUILDING AREA:	FIRST LEVEL -	8,550 SF
	SECOND LEVEL -	4,400 SF

2015 MICHIGAN BUILDING CODE

SECTION 508 MIXED USE AND OCCUPANCY

508.2 Accessory occupancies. Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through 508.2.4.

Exceptions

508.2.1 Aggregate accessory occupancies shall not occupy more than 10% of the building area of the story in which they are located and shall not exceed the tabular values in Table 503.

508.2.2 Occupancy classification. Accessory occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

903.2.1.2 Where required Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies were one of the following conditions exists:

- The fire area exceeds 12,000 square feet
- The fire area has an occupant load greater than 300 or more.
- The fire area is located on a floor other than a level of exit discharge serving such occupancies

SECTION 1007 ACCESSIBLE MEANS OF EGRESS

1007.1 Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Section 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

- Accessible means of egress are not required in alterations to existing buildings.
- One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5.
- In assembly spaces with sloped floors, one accessible means of egress is required from a space where the common path of travel of the accessible route for access to the wheelchair spaces meets the requirements in Section 1025.8.

1007.2 Continuity and components. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:

- Accessible routes complying with Section 1104.
- Stairways within vertical exit enclosures complying with Sections 1007.3 and 1020.
- Exterior exit stairways complying with Sections 1007.3 and 1023.
- Elevators complying with Section 1007.4.
- Platform lifts complying with Section 1007.5.
- Horizontal exits complying with Section 1022.
- Ramps complying with Section 1010.
- Areas of refuge complying with Section 1007.6.

Exceptions:

- Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided in accordance with Section 1007.8.
- Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8.

SECTION 1008 DOORS

1008.1.1 Size of doors. The minimum width of each door opening shall sufficient for the occupant load thereof and shall provide a clear width of 32 inches.

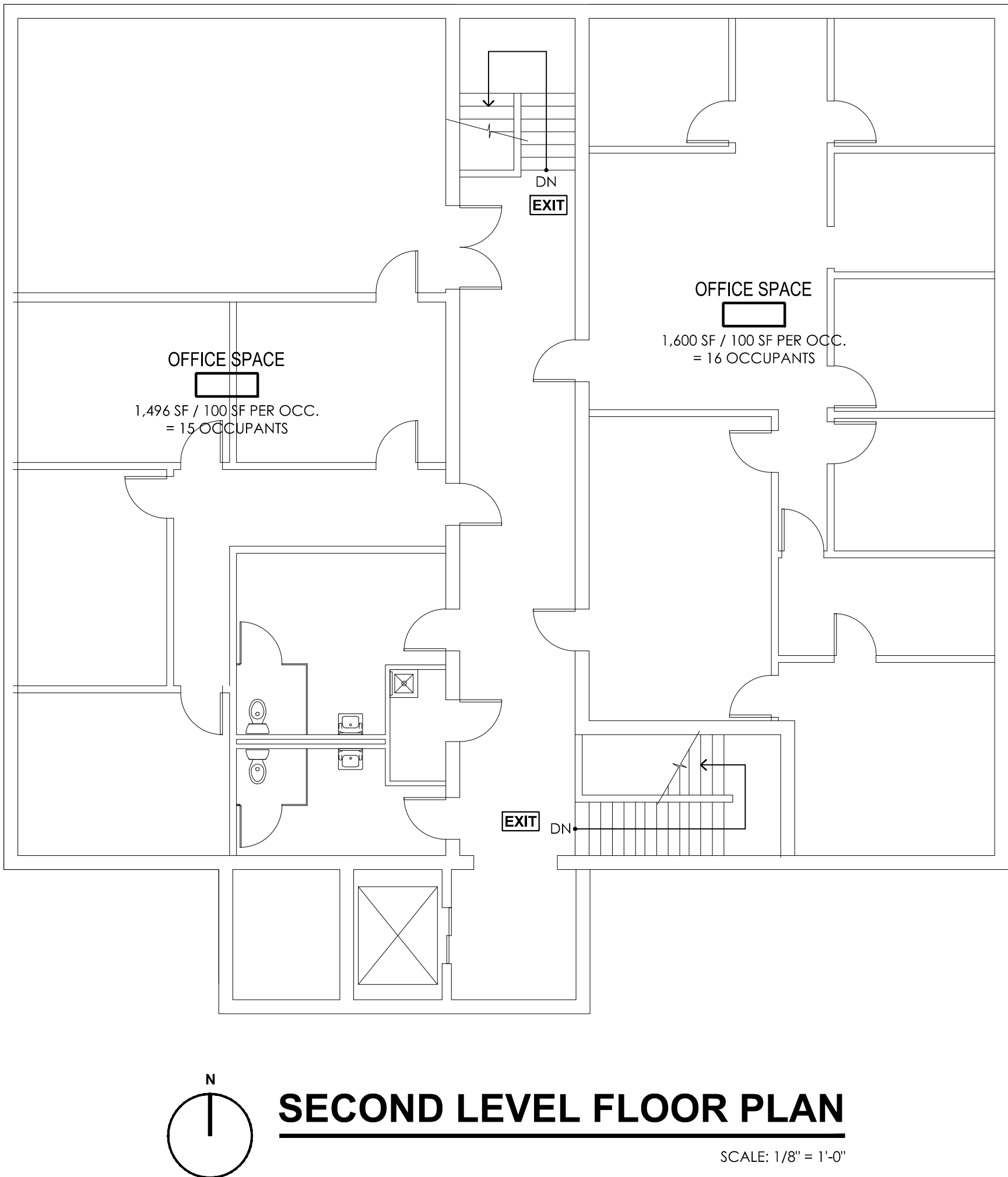
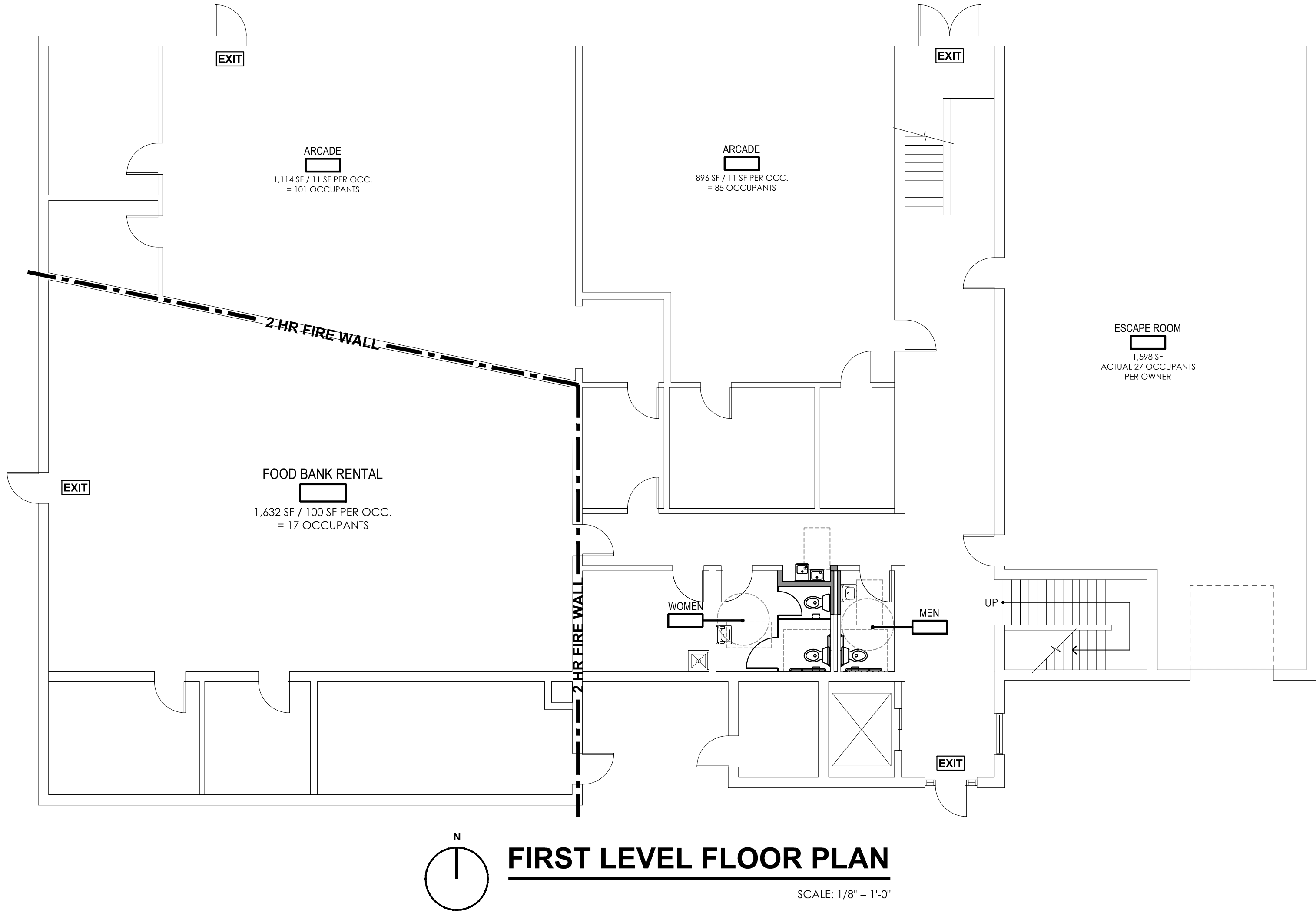
1008.1.2 Door swing. Egress doors shall be of the pivoted or side-hinged swinging type. Doors shall swing in the direction of egress travel where serving a room or are containing an occupant load of 50 or more.

SECTION 1011 EXIT SIGNS

1011.1 Where required. Exits and exit access doors shall be marked by an approved exist sign readily visible from any direction of egress travel.

Classification	Description	Water Closets		Lavatories		Drinking Fountain	Other
		Male	Female	Male	Female		
A-3	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	1 per 125	1 per 65	1 per 200	1 per 200	1 per 500	1 service sink.
B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	1 per 200	1 per 200	1 per 100	1 service sink

Classification	Total Number of Occupants	Water Closets		Lavatories		Drinking Fountain	Other
		Male	Female	Male	Female		
1st Floor Level -(A-3)	213	1	1	1	1	1	1
1st Floor Level -(B)	17						
2nd Floor Level -(B)	31	1	1	1	1	1	1





City of Mason Planning Commission *Staff Report*

TO: Planning Commission
FROM: Elizabeth A. Hude, AICP - Community Development Director
SUBJECT: Site Plan Review – 525 N. Cedar St. – Timeless Treasures
DATE: May 9, 2019

Tavis Cherry, Timeless Treasures, has requested final site plan approval for the renovation of an existing building to be used as an antique mall with up to 68 vendor spaces located at 525. N. Cedar St. The proposal is shown on the following plans and documents:

- Zoning Permit Application, received April 15, 2019
- Letter requesting consideration of a parking reserve area, dated April 12, 2019
- Letter requesting a waiver of landscaping requirements, dated May 6, 2019
- Civil drawings, DC Engineering, dated March 25, 2019, revision submitted May 6, 2019
- Architectural drawings, Studio Intrigue, dated/last revised March 1, 2019

The applicant paid the required fee of \$100, and together with the plans and documents listed above, the application appears to satisfy the submittal requirements of Sec. 94-226(c).

CONSTRUCTION SCHEDULE

The project is expected to begin as soon as possible and be open for business in the summer of 2019.

LAND USE/ZONING/MASTER PLAN:

The development is proposed on a parcel zoned C-2 General Commercial District. The applicant seeks to expand the useable floor area of a building for a retail use, a use permitted by right under Sec. 94-142(9). In accordance with Sec. 94-222(1), uses in the C-2 zoning district are subject to final site plan review prior to the granting of a building permit or a certificate of occupancy. In accordance with Sec. 94-223(2), because the use increases the number of required parking spaces from the previous use by more than two spaces, staff is unable to review the site plan administratively and hereby refers the application to the Planning Commission for review.

In addition, special outdoor events may take place once per month which would provide for additional vendor space outdoors. Outdoor retail sales and service are permitted by right according Sec. 94-142(14) and subject to site plan review. Staff recommends the applicant pursue a Special Event application for future outdoor events through the City Manager's office, or return with an amended site plan to permanently approve the outdoor retail area and additional parking. This does not need to be made a condition of the site plan approval.

The surrounding land uses and zoning are as follows:

	Current Land Use	Zoning	Future Land Use
North	Commercial	C-2 General Commercial District	Commercial
East	Commercial	C-2 General Commercial District	Commercial
South	Public (Ingham County Road Commission)	C-2 General Commercial District	Public
	Vacant	AG Single Family Agricultural	Mixed Use
West	Vacant	01 Office District	Mixed Use

The use and redevelopment of this property is generally consistent with the Master Plan, p.3-2:

“Cedar Street Business Corridor: The Cedar Business Corridor includes most of the land along Cedar Street from the US-127 interchange to South Street. This corridor presents varying conditions as one travels its length. The Plan establishes differing policies for the northern and southern portions of the corridor.

The northern half of the corridor, generally extending from the highway interchange to North Street, is afforded excellent regional access by the presence of the US-127 interchange. This segment has evolved as a business corridor catering to the convenience needs of the highway traveler and uses that particularly benefit from proximity to the highway because of the regional market on which they rely. The Plan supports the continued role of this portion of Cedar as a highway business corridor. The Plan supports the redevelopment of properties in this area to enhance their impact on the City’s overall character.

Future commercial development and redevelopment should be characterized by predominantly highway-oriented uses and uses that are particularly dependent on regional access. However, this corridor segment should undergo improvements to heighten public safety and visual amenities. These improvements should include streetscape improvements that address, in part, landscaping and lighting, signage, limitations on the frequency and number of driveways, and the use of shared service drives. This portion of Cedar Street serves as one of the primary entrances into the City. Its visual character impacts perceptions of the community as a whole and its desirability as a place of commerce.”

COMMENTS – DEPARTMENTS AND AGENCIES

Staff circulated the application and plans to city staff and agencies with jurisdiction over the project on April 29, 2019. The following comments were received.

Police	Provide additional lighting on the building near entrances, at the rear.
Fire	Remove gates at curb, verify 20’ un-obstructed access lane at south gate in side yard.
DPW	Parking surface in the rear needs to meet City standards. Future plan needs to address drainage.

STAFF REVIEW

Staff finds that the Site Plan appears to meet the standards for Final Site Plan Approval with the requested waivers and conditions noted below. Comments are provided below as findings of fact related to the requirements and standards listed.

§94-227. Standards for site plan review and approval. In reviewing an application for site plan review and approval the following standards shall apply:

STATUS/N OTE	REQUIREMENT
M = Appears to meet requirement; D = Does not appear to meet requirement; I = Information Needed; R = Recommendation; W = Waiver requested; <i>Italics = Staff comments</i>	
M	(1) The site shall be developed so that all elements shall be harmoniously and efficiently organized in relation to the size, shape, type and topography of the site and surrounding property.
<i>No changes to the building or topography are proposed. The landscaping and removal of the gate and barrier will improve the efficiency of the site and its relationship to the surrounding property.</i>	
M	(2) The site shall be developed so as not to impede the normal and orderly development, improvement, and use of surrounding property for uses permitted in this chapter.
<i>The site arrangement is pre-existing and does not appear to impede use of surrounding properties.</i>	
M	(3) All buildings or groups of buildings shall be arranged to permit emergency vehicle access by some practical means to all sites.
<i>The gate at the curb and guardrail will be removed and improve access to the building by emergency vehicles.</i>	
<i>The building is accessible from all sides for emergency vehicle access. The gate openings on the north and south sides of the buildings are marked and measure 20' wide (south) and 24' wide (north). The south gate will remain unobstructed.</i>	
M	(4) Every structure or dwelling unit shall have direct access to a public street or indirect access to a public street via an approved dedicated private street.
<i>The site is located on a public right of way known as Cedar Street/M-36. M-36 is under the jurisdiction of the Michigan Department of Transportation.</i>	
M	(5) Appropriate measures shall be taken to ensure that the addition or removal of surface waters will not adversely affect neighboring properties, that controls are in place to minimize sedimentation and erosion, and that topographic alterations are minimized to accommodate storm water management.
<i>NOTE: See (6) below.</i>	
M/I	(6) Provisions shall be made for the construction of storm sewer facilities including grading, gutters, piping, on-site storage, and treatment of turf as required to handle stormwater and prevent erosion.
<i>No changes are proposed to the existing topography or storm water management. If the rear overflow parking area is required to be constructed, storm drainage plans are required for the parking area in the rear.</i>	
M	(7) Secondary containment for above ground areas where hazardous substances are stored or used shall be provided as required by the city fire chief.
<i>No hazardous substances will be stored or used on site.</i>	
M	(8) Exterior lighting shall be designed and located so that the source of illumination is directed away from adjacent properties, the intensity of lighting is the minimum necessary, and the direction of lighting is downward as much as is possible and appropriate for the project.
<i>No change proposed to existing lighting on the site. The plan shows existing lights on all sides of the building's exterior.</i>	
M	(9) All loading and unloading areas, outside storage areas, and refuse receptacles shall be screened from casual view from the public rights-of-way and adjoining land uses.
<i>A 12x25 loading zone will be provided on the south side of the building.</i>	
See a-c	(10) Site plans shall meet the driveway, traffic safety, and parking standards of the city in

below	such manner as necessary to address the following:
M	a. Safe and efficient vehicular and non-vehicular circulation, including parking areas, non-motorized linkages to abutting parcels, uses, sidewalks, and trails.
<i>There is an existing sidewalk in the MDOT right of way. The proposed plan appears to meet the requirements for safe and efficient vehicular access and Sec. 94-176 Supplemental Access Regulations. See also comments in (12) below, Sec. 94 Art. X – Parking and Loading Areas.</i>	
M	b. Shared driveways and service drives.
<i>The site has one access points – a curb cut along M-36 on the property</i>	
M/I	c. Adequate and properly located utilities.
<i>The site is currently served by water and sanitary sewer. No new water or sanitary sewer services are proposed for this project. If the rear overflow parking area is required to be constructed, storm drainage plans are required for the parking area in the rear.</i>	
M	(11) Provisions shall be made for proposed common areas and public features to be reasonably maintained.
<i>The plan appears to meet this requirement.</i>	
M/R See below	(12) The site plan submittal shall demonstrate compliance with all applicable requirements of this chapter, chapters 58 and 74, the building code, and county, state, and federal law.
M	Chapter 94 – Zoning and Chapter 100 – Dimensional Requirements
<i>The plan appears to the meet the building height, setbacks and lot coverage site development standards listed in Section 94-121(c) and Tables 100-1 and 100-2 as noted on the plan sheets.</i>	
M	Sec. 94-172(3) Vision clearance across corner lot.
<i>The proposed plan appears to meet the requirements for vision clearance where the drive intersects with M-36. There appear to be no obstructions caused by landscaping or signage.</i>	
D/W	Sec. 94 – Art. X Off-street Parking and Circulation
<i>Sec. 94-292(j)(1) prohibits parking in a front yard in a C-2 district. The front yard is defined as the area between the front property line and the building line (Figure 100-101) except upon a finding by the planning commission that such parking is a critical component of the operation of the particular use and that adequate provisions are included for the screening and landscaping of such parking area.</i>	
<i>The existing building and front yard parking are pre-existing conditions and the public entrances to the building are oriented accordingly. Staff supports a finding that parking is a critical component to the operation of the existing building and should be allowed to continue. Landscaping will be provided to soften the impact as discussed in the next section - landscaping requirements.</i>	
<i>The front parking area is delineated in a manner that provides for adequate circulation of vehicles and a clear path toward the entrance. The removal of the gate and guardrail will improve circulation on the site.</i>	
<i>Staff has reviewed the request for deferred parking. They are required to provide 56 spaces but propose to provide 29 and set aside a designated reserve area for the remaining 27 spaces. In accordance with Sec. 94-292(g)(2) Parking space deferment, the Planning Commission has the following authority:</i>	
<i>“Where the property owner can demonstrate that the required amount of parking is excessive, the site plan approving body may waive the parking requirement and approve a parking area smaller than required. The parking</i>	

area waived shall be designated as reserved parking area for possible future use. The site plan approving body may subsequently require the applicant to construct additional parking spaces upon a determination by said body that the reduced number of parking spaces is not adequate to meet the parking needs of the use and public safety and welfare is at risk. Upon such a determination, the applicant shall convert the reserved parking area into available parking spaces in compliance with said determination and the requirements of this article within six months of being so directed in writing by the zoning official. The approved site plan shall clearly identify the location of this reserved parking area including dimensions and dotted parking space layout, and no buildings, structures, or similar improvements shall be established in the reserved parking area. A notice clearly identifying the location and number of reserved parking spaces should be recorded with the Ingham County Register of Deeds by the owner as a condition of final site plan approval. This discretion shall be guided by the basis of determination set forth at section 94-191(f). This subsection shall apply only to office, commercial, and industrial uses that are required to provide more than 50 parking spaces.”

While the comparison provided in the letter does not consider the fact that the referenced businesses are part of a C1 district where parking is provided in public lots and on-street parking spaces, there is sufficient space on the lot to create parking in the future if necessary. Therefore, staff recommends that the Planning Commission waive the parking requirement for 56 spaces and allow a reserved parking area for 27 spaces to be set aside for future conversion into available parking if directed to do so by the zoning official; and that the location and number of spaces shall be recorded with the Ingham County Register of Deeds prior to obtaining a certificate of occupancy.

M/R	<i>Sec. 94-241 Landscape, screening and buffer requirements</i>
-----	---

It appears that per Sec. 94-241(e)(6) the Planning Commission has the ability to waive requirements in Sec. 94-241. The applicant has submitted a request for waivers from the landscaping requirements. Therefore, the Planning Commission may choose to waive the requirements as requested so long as the intent to provide landscaping within parking areas, and to enhance aesthetic and ecological qualities, character, privacy, and land value is met. The Planning Commission has the option to accept the proposed plan and waive the requirements for the landscaping pursuant to Section 94-241 (e)(6), or require the plan to be revised with the required vegetation.

The applicant has submitted a letter requesting waivers from the landscaping requirements.

Per Sec. 94-241 the site is required to have:

Sec. 94-241(c)8 – 10% of the site area shall be landscaped with grasses and other live groundcovers, planting beds, and trees, or combinations thereof, and the site shall include a minimum of one tree per 10,000 square feet of disturbed land, or fraction thereof...

With the existing vegetation the plan appears to meet this requirement.

Sec. 94-241(e)(1) – Buffer A on all sides of the property: 5-foot landscape buffer; if the applicant cannot reasonably comply with the buffer zone standards, then the Planning Commission can determine the character of the buffer based upon the standards listed in Sec. 94-241(e)(3).

Front – 4,000 s.f. landscape buffer along the front is proposed with ten (10) trees.

Rear/Sides – Waiver requested.

Sec. 94-241(i) – Off-street parking landscape development standards require one canopy tree and 100 sq. ft. of landscaped area per eight spaces. Landscaped areas shall be protected by a raised standard or rolled concrete curb.

The applicant has not proposed any landscaping changes to the existing parking area; however, the front

buffer will improve the visual impact of the parking lot. Per the previous discussion on parking, the new parking area in the rear will be subject to the landscaping requirements.

Table 100-4 sets forth the required landscape buffers for the C-2 Zoning District.

	Zoning	Landscape Buffer Required
North (front)	C-2 (Hebs Inn)	A
Northeast (front)	C-2 separated by Cedar Street (M-36)	A (see Sec. 94-241(e)(4))
South	C-2	A
South	AG	B
West	O1	A

M/I Chapter 58 - Signs

No new or expanded freestanding sign is proposed.

Any proposed signage will require a separate building permit subject to the requirements of Chapter 58 of the Zoning Ordinance, including Division 2 of said chapter.

Chapter 74 – Subdivisions – Not applicable

Building Code – The building permit is currently under review by the Building Inspector. A building permit will not be issued until the site plan is approved.

County, State and Federal Law – See Agency Comments. The applicant is responsible for seeking and complying with additional permit requirements.

ACTION

§94-226. Final site plan review and approval.

The planning commission shall have the authority to approve, approve with conditions, or deny an application for final site plan review and approval. *The Planning Commission may also choose to amend the proposed resolution, or continue the review to a future time and date certain to allow for plans to be revised and/or for the applicant to provide additional information.*

§94-229. Extension of site plan approval.

Approvals of a final site plan are valid for a period of 12 months. Only one extension of a final site plan may be granted for an additional 12 months at the sole discretion of the approving authority. A final site plan is deemed to have expired if a building permit has not been obtained for the development within 12 months of approval of the final site plan. A request to extend preliminary or final site plan validity shall be submitted prior to the expiration of the preliminary or final site plan.

§94-230. Conformance to approved site plan.

A development project shall conform to the approved final site plan. Failure to conform to the approved final site plan shall constitute a violation of this chapter.

However, amendments to an approved site plan can be made subject to the provisions of §94-228 Amendments to an approved site plan.

§94-231. Review standards for planning commission decision.

(a) A decision rejecting, approving, or conditionally approving a site plan shall be based upon requirements and standards contained in the zoning ordinance, other statutorily authorized and properly adopted local unit of government planning documents, other applicable ordinances, and state and federal statutes.

(b) A site plan shall be approved if it contains the information required by the zoning ordinance and is in compliance with the conditions imposed under the zoning ordinance, other statutorily authorized and properly adopted local unit of government planning documents, other applicable ordinances, and state and federal statutes.

The applicant has submitted a Final Site Plan that, with the waivers and conditions listed, appears to contain the information required by the zoning ordinance, and will meet the standards for Final Site Plan approval.

Therefore, the following motion is offered for consideration:

MOTION

Motion to approve Resolution 2019-06.

Attachments:

1. Resolution
2. Application
3. Site Plan
4. Architectural Plans

Introduced:
Second:

**CITY OF MASON
PLANNING COMMISSION
RESOLUTION No. 2019-06**

**A RESOLUTION APPROVING A FINAL SITE PLAN FOR THE CHANGE OF USE OF AN EXISTING 8,100
SQUARE FOOT BUILDING TO AN ANTIQUE MALL WITH A NEW PARKING RESERVE AREA ON PROPERTY
LOCATED AT 525 N. CEDAR STREET.**

May 14, 2019

WHEREAS, a request has been received from Tavis Cherry, Timeless Treasures for a Final Site Plan approval for the change of use of an existing 8,100 square foot building to an antique mall with a new parking reserve area; and

WHEREAS, the proposal was shown on revised plans submitted on May 6, 2019 and dated March 25, 2019; and

WHEREAS, the subject property is further described as 525 N. Cedar; and

WHEREAS, the parcel is zoned C-2 (General Commercial District); and

WHEREAS, Section 94-222 states that any use within the C-2 zoning district requires site plan review; and

WHEREAS the Planning Commission accepts the staff report dated May 9, 2019 as finding of fact that with the following waivers listed herein, the plans will comply with the Final Site Plan Review Standards listed in Section 94-227 of the Mason Code; and

WHEREAS the Planning Commission further makes the following findings of fact:

- The Planning finds that the applicant has demonstrated that the required amount of parking is excessive; and
- The Planning Commission finds that due to the unique topography due to pre-existing vegetation along the rear property line, pre-existing parking surfaces and buildings along the north, and south property lines and the MDOT right of way, a waiver from the buffer requirements can be granted which considers existing vegetation, pre-existing parking surfaces between adjacent properties, and visibility for traffic traveling along the MDOT right of way.

NOW THEREFORE BE IT BE RESOLVED, that the Mason Planning Commission does hereby approve a Final Site Plan for the change of use of an existing 8,100 square foot building to an antique mall with a new parking reserve area property located at 525 N. Cedar Street with the following waivers:

- A waiver is granted to allow for a reserved parking area for 27 spaces to be set aside for future conversion into available parking if directed to do so by the zoning official; the location and number of spaces shall be recorded with the Ingham County Register of Deeds prior to obtaining a certificate of occupancy; and
- A waiver of the landscaping requirements is granted and landscaping is approved as shown on the plan

Yes ()

No ()

Absent ()

Vacant ()

CLERK'S CERTIFICATION: I hereby certify that the foregoing is a true and accurate copy of a resolution adopted by the Planning Commission at its meeting held Tuesday, May 14, 2019, the original of which is part of the City of Mason Planning Commission minutes.

Sarah J. Jarvis, Clerk
City of Mason
Ingham County, Michigan



PERMIT APPLICATION

ZONING

Applicant– Please check one of the following:	
<input type="checkbox"/>	Preliminary Site Plan Review
<input checked="" type="checkbox"/>	Final Site Plan Review
<input type="checkbox"/>	Special Use Permit*
<input type="checkbox"/>	Administrative Review
* includes Preliminary Site Plan Review	

DEPARTMENT USE ONLY	
Application Received:	_____
Tax ID:	_____
Fee:	_____
Receipt #:	_____

Applicant Information:

Name: Tavis Cherry

Organization: Timeless Treasures

Address: 2563 Lamb Road Mason, MI 48854

Telephone Number: 517-202-6637 Facsimile Number: _____

Interest in Property (owner, tenant, option, etc.): Owner

Note: If applicant is anyone other than owner, request must be accompanied by a signed letter of authorization from the owner.

Property Information:

Owner: Tavis Cherry Telephone Number: 517-202-6637

Property Address: 525 N. Cedar Street Mason, MI 48854

Legal Description: If in a subdivision: Subdivision Name: _____ Lot Number: _____

If Metes and Bounds (can be provided on separate sheet): COM W 1/4 COR SEC 5, S 89-25-40 E 2268.91 FT, S 00-34-20 W 987.36 FT TO POB, N 46-22-46 W 300 FT, N 89-25-40 W 800 FT, S 00-34-20 W 204.78 FT, S 89-25-40 E 1019.23 FT TO POB SEC 5 T2NR1W CITY OF MASON. 4.17 ACRES

APPLICANT CERTIFICATION

By execution of this application, the person signing represents that the information provided and the accompanying documentation is, to the best of his/her knowledge, true and accurate. In addition, the person signing represents that he or she is authorized and does hereby grant a right of entry to City officials for the purpose of inspecting the premises and uses thereon to verify compliance with the terms and conditions of any Special Use Permit and/or Site Plan approval issued as a result of this application.

Signature: Tavis Cherry Date: 4-15-19

Requested Description:

Written Description: Please use this section to describe the use or uses proposed. Attach additional pages, if necessary.

Use existing building and site for antique store.

Available Services

Public Water ☒ Yes ☐ No

Paved Road (Asphalt or Concrete) ☒ Yes ☐ No

Public Sanitary Sewer ☒ Yes ☐ No

Public Storm Sewer ☒ Yes ☐ No

Estimate the Following

Traffic Generated _____

Total Employees 2

Population Increase _____

Employees in Peak Shift 2

House of Operation 11:00 AM to 6:00 PM

Total Bldg. Area Proposed n/a

TUE Day through SUN day

Parking Spaces Provided 29

Project Phasing

This project will be completed in: ☒ One Phase ☐ Multiple Phases – Total No. of Phases: _____

Note: The phases of construction for multi-phase projects must be shown on the site plan

Application Materials

The following are checklists of items that generally must be submitted with applications for Preliminary Site Plan Review, Final Site Plan Review, and Special Use Permits. Applicants should review Articles VI and VII of Chapter 94 of the Mason Code for a complete listing of application requirements. All site plan drawings must comply with the requirements of Section 94-226(d) of the Zoning Ordinance. Incomplete applications will not be processed.

- ☒ Completed application form
- ☒ 2 copies of full scale site plan drawings
- ☒ Plans submitted on CD or PDF (email is acceptable)
- ☒ Legal description
- ☒ Proof of ownership/owner authorization
- ☐ Construction schedule for proposed project
- ☐ Construction calculations for utilities
- ☒ Fee (see below)
- ☒ Any other information deemed necessary

Application Fee

All requests must be accompanied by a fee, as established by the City Council. The fee schedule for Preliminary Site Plan Reviews, Final Site Plan Reviews, and Special Use Permits is as follows (As of October 16, 2006):

Administrative Reviews	\$70.00
Preliminary Site Plan Reviews	\$200.00
Final Site Plan Review	\$100.00
Special Use Permits (includes preliminary site plan review)	\$275.00

Engineering Review

\$220.00*

*Two—hour minimum fee for projects increasing demand on public utilities. Actual fees incurred are billed to applicant upon completion of review.

Application Deadlines

Preliminary Site Plan/Special Use Permit Review

Applications for Preliminary Site Plan Review may be submitted at any time. Complete applications must be received a minimum four (4) weeks prior to a Planning Commission meeting to be placed on the agenda. Upon receipt of a complete application, a public hearing will be scheduled for the next regularly scheduled meeting (for Special Use Permits only). The Planning Commission has the final authority to approve, approve with conditions or deny an application for Preliminary Site Plan/Special Use Permit Review. The Planning Department staff will issue a letter to the applicant advising of any changes or revisions that may be necessary prior to making application for Final Site Plan Review.

Final Site Plan Review

Complete applications must be received a minimum of four (4) weeks prior to a Planning Commission meeting to be placed on an agenda. The Planning Commission has the final authority to approve, approve with conditions or deny an application for Final Site Plan Review. Planning Commission meetings are held on the second Tuesday after the first Monday of every month, unless the Tuesday is a Township recognized holiday, in which case the meeting is held on the following day (Wednesday).

Staff Report

The Planning Department Staff will prepare a report to the Planning Commission regarding an application for Preliminary Site Plan Review, Final Site Plan Review or Special Use Permit. The report will explain the request and review whether it complies with the zoning standards of the Mason Code. Staff will present the findings of that report during the Planning Commission meeting. An applicant who wishes to obtain one (1) copy of that report, at no cost, prior to the meeting must provide a written request to the Planning Department. The report is generally complete on the Friday before the meeting and can be mailed to the applicant or picked up by the applicant in the Planning Department.

Resources: More questions? Please contact our Customer Service Desk at 517.676.9155.

Revised 7.2.2018 (Community Development)



ENGINEERING

PC

April 12, 2019

Ms. Elizabeth A. Hude
Community Development Director
201 West Ash Street
Mason, MI 48854

RECEIVED

APR 15 2019

**CITY OF MASON
PLANNING DEPT.**

**Re: 525 N. Cedar Street
Parking Waiver Request**

Dear Ms. Hude;

Timeless Treasures is proposing to utilize the existing development at 525 N. Cedar Street for their antique business. Per City of Mason zoning ordinance, the site is required to be provided with 56 parking spaces. We believe this number of parking spaces exceeds the need for the proposed use. We hereby request a reduction of the number of parking spaces to 29. Additionally, the site use plan will provide for a reserve location for the additional 27 parking spaces should the need arise in the future. Following is our justification for the request.

The City of Mason Zoning Code parking requirement does not have a category explicitly for an antique store. The closest category would be a retail store. This requires one parking space for every 150 sqft of useable floor area. The existing building has approximately 8,100 sqft of useable floor space. This results in a required parking space count of 56 spaces.

We have researched other municipal zoning codes in the area and have identified three which provide a category more suitable for an antique store. These municipalities include: City of Lansing, Delta Township, and Delhi Township. These communities would categorize an antique store as a furniture store which would require one parking space per 850 sqft of useable floor space. Using this rate, the required parking for the site would be 10 spaces.

We have also researched the provided parking at three other antique stores in the Mason area, explicitly the Old Mill Antiques Mall, Mason Antiques District, and Maple Street Mall. These businesses operate with parking well below that required by zoning code. The provided parking at these businesses is summarized in the following table. Building area has been obtained from on-line assessor data and the count of provided parking was obtained using Google earth. Usable Floor Area was assumed to be 85% of the total building area.

Business	Total Floor Area (sf)	Usable Floor Area (sf)	Parking Required per City Mason Zoning (each)	Parking Provided (each)	Parking Provided per sqft Usable Floor Area (sf per space)
Old Mill Antiques Mall	4,400	3,740	44	13	288
Mason Antiques District	6,708	5,702	39	16	357
Maple Street Mall	7,676	6,525	44	16	408

We are proposing to provide 29 parking spaces at the proposed Timeless Treasure facility. This equates to one parking space per 280 sqft of usable floor space. This rate of parking is approximately one-half of the rate required by City of Mason ordinances, is approximately twice the rate of other municipality, and is higher than the three other antique stores in Mason.

We believe the proposed 29 parking spaces will be adequate for the Timeless Treasure operation. The existing site does have an additional 2.5 acres of vacant space west of the existing building. This area is available to construct additional parking spaces in the event that more spaces are required. A "reserve" parking area for 27 parking spaces has been indicated on the site use plan.

We thank you for your consideration in this matter. If you have any questions, or require additional information, please feel free to contact me.

Sincerely,



Kurt R. Krahulik, P.E.
Vice-President

CC: Tavis Cherry, Timeless Treasures



May 6, 2019

City of Mason
Planning Commission
201 West Ash Street
Mason, MI 48854

RE: Timeless Treasure Proposed Site Improvements

To whom it concerns:

Timeless Treasures has purchased the property at 525 N Cedar Street with the purpose of creating an antique store. We are proposing minor site improvements, such as removal of gates and guardrails, and redesign of the front parking lot. Per ordinance, we are required to bring the landscaping of the entire property up to current code. Our site improvements also include removing existing pavement along the Cedar Street frontage for the purpose of adding landscaping. We are not proposing to add landscaping along the other three property lines. We are formally requesting the Planning Commission waive some of the landscaping requirements.

The Ordinance requires that the landscape plan has a maximum scale of 1"=20' and be sealed by a licensed landscape architect. The submitted landscape plan is at a 1"=40' scale. We feel that this scale adequately presents the proposed landscaping plan, and that a larger scale would not provide additional information or clarification. We also feel that the landscape plan is simplistic in nature and does not require the expertise of a licensed landscape architect. We request the Planning Commission waive these two requirements.

The proposed landscaping improvements consist of the construction of 4,000 sf of landscape area. Ordinance requires the planting of ten trees along Cedar Street. Ten trees are proposed. We are not proposing to add any additional plantings along the other three property lines. We request the Planning Commission waive the required plantings along the non-vegetated portions of the north and south property lines.

It is our understanding that the Planning Commission may waive landscaping requirements, if they choose, when considering the following:

a. Traffic Impact

There is no anticipated traffic impact from the proposed development. The addition of the trees along the Cedar Street frontage will soften the impact of the Cedar Street corridor.

b. Increase in Building and Parking Lot Coverage

There is no proposed change in building or parking lot coverage.

c. Increase in outdoor sales, displays, or manufacturing area

There is no proposed increase in outdoor sales, displays or manufacturing

- d. Physical characteristics of the site and surrounding area including topography, vegetation, and other natural features.

The rear of the property abuts up to vacant lands. This area of the rear of the property is already fully vegetated.

The north property line, except as noted above, has no plantings. There is an existing building on the adjacent parcel which runs along the majority of the non-planted property line. We do not feel that additional plantings along this section of the property line would enhance either parcel.

The south property line is shared with an adjacent commercial business and the Ingham County Road Commission storage yard. The adjacent commercial property's parking lot and our parking lot, currently extend to the property line. This configuration is a pre-existing condition. We feel that a change in this configuration would be detrimental to each business operations. The remainder of the south property line is against the Road Commission's storage yard. This portion of the property line is hidden from view from the street. We feel that additional plantings along this portion of the property line would not enhance either parcel.

- e. Visual, Noise, Air Pollution

The proposed development will not result in an increase in Visual, Noise or Air Pollution.

- f. Health, Safety, Welfare

We do not believe that the addition of plantings along the south and north property lines will adversely impact the Health, Safety, and Welfare of the public.

- g. Additional dwelling units and resulting density in a residential development

The proposed development is not residential in nature. It also does not abut any residential developments.

- h. Location and dimension of existing easement on the site

There are no public easements located on the site.

- i. Any other criteria pertinent to the proposed use or character of the site.

None

We hope the above narrative assists you in your decision in regards to this matter. We look forward to working with the City to our mutual success of the City of Mason.

Sincerely,

Tavis Cherry

CITY OF MASON
P.O. BOX 370
201 W. ASH ST.
MASON MI 48854-370
Phone : (517) 676-9155
WWW.MASON.MI.US

Received From:
CHERRY, TAVIS JAMES
2563 LAMB ROAD
MASON MI 48854

Date: 04/15/2019
Receipt: 100247068
Cashier: SO

Time: 3:42:18 PM

ZONING PERMIT APPLICATION
525 N CEDAR-TIMELESS TREASURES

ITEM REFERENCE	AMOUNT
PERBUS PERMIT-VARIOUS BUS LICENSE & PERMIT	
S	\$100.00
525 N CEDAR-ZONING PERMIT	\$100.00
TOTAL	\$100.00
CHECK 417	\$100.00
Total Tendered:	\$0.00

Change:

CITY OF MASON
P.O. BOX 370
201 W. ASH ST.
MASON MI 48854-370
Phone : (517) 676-9155
WWW.MASON.MI.US

Received From:
CHERRY, TAVIS JAMES
2563 LAMB ROAD
MASON MI 48854

Date: 04/15/2019
Receipt: 100247068
Cashier: SO

Time: 3:42:18 PM

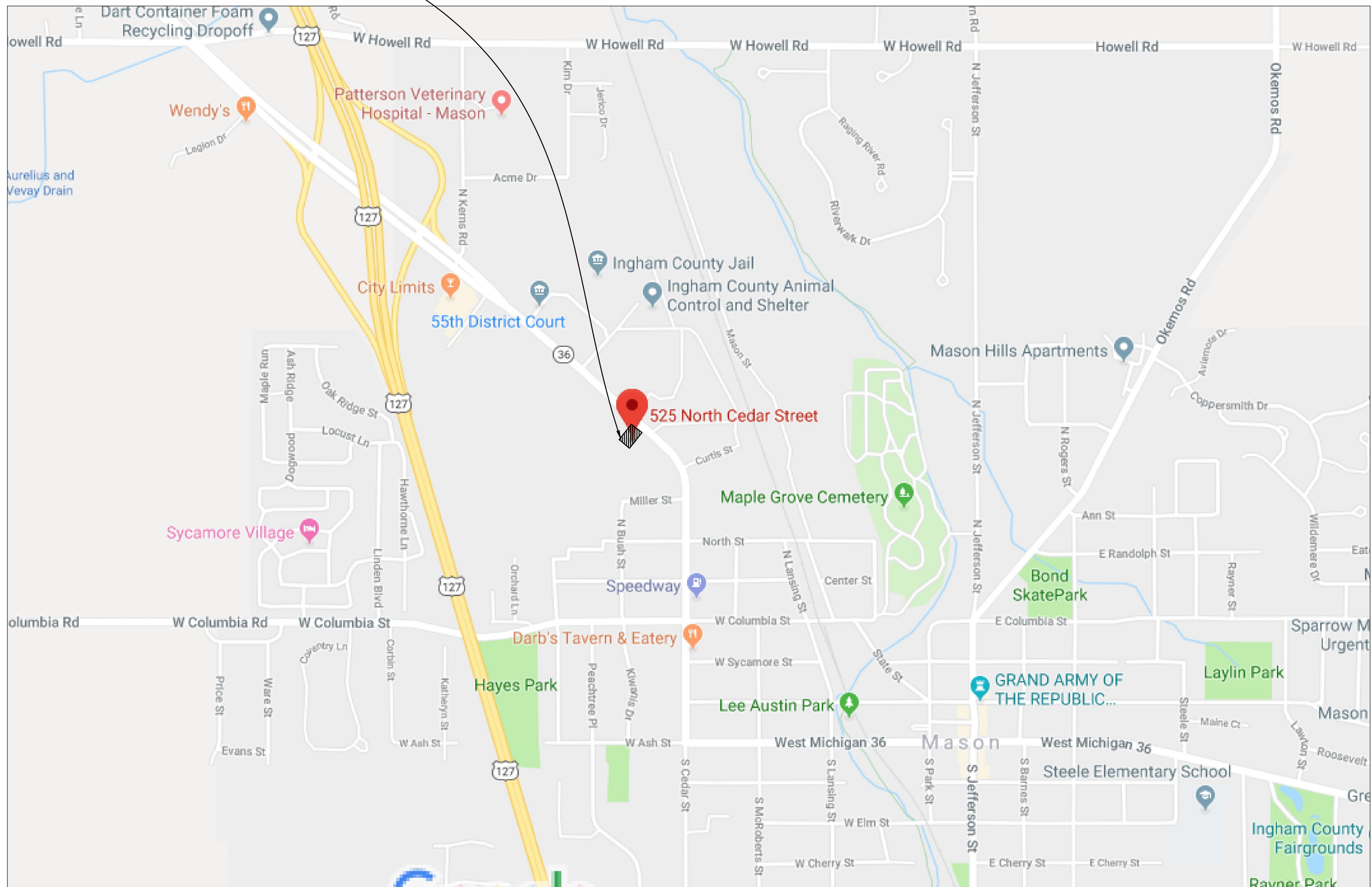
ZONING PERMIT APPLICATION
525 N CEDAR-TIMELESS TREASURES

ITEM REFERENCE	AMOUNT
PERBUS PERMIT-VARIOUS BUS LICENSE & PERMIT	
S	\$100.00
525 N CEDAR-ZONING PERMIT	\$100.00
TOTAL	\$100.00
CHECK 417	\$100.00
Total Tendered:	\$0.00

Change:

TIMELESS TREASURES
525 N. CEDAR STREET
SECTION 5, TOWN 2N, RANGE 1W
CITY OF MASON, INGHAM COUNTY, MICHIGAN

PROJECT LOCATION



SITE LOCATION
NO SCALE

CONTACTS:

PLANNING	ELIZABETH HUDE, DIRECTOR CITY OF MASON PLANNING DEPARTMENT 201 W. ASH ST MASON, MI 48854
TRANSPORTATION	MDOT LANSING TRANSPORTATION CENTER 2700 PORT LANSING RD LANSING, MI 48906 (517) 335-3754
GAS	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
ELECTRIC	CONSUMERS ENERGY 1955 W PARNALL RD JACKSON MI 49201 (517) 788-1191
WATER	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
SANITARY	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200
STORM	DONALD B. HECK, PE WOLVERINE ENGINEERS & SURVEYORS, INC. 312 NORTH STREET MASON, MICHIGAN 48854-1169 (517) 676-9200

PROPOSED DEVELOPMENT:

USE EXISTING SITE AS AN AUCTION HOUSE. NO
SIGNIFICANT IMPROVEMENTS PROPOSED.

PROPERTY DATA:

LAND AREA: 4.17 ACRES
TAX ID NUMBER: 33-19-10-05-328-003

LEGAL DESCRIPTION:

COM W 1/4 COR SEC 5, S 89-25-40 E
2268.91 FT, S 00-34-20 W 987.36 FT TO
POB, N 46-22-46 W 300 FT, N 89-25-40
W 800 FT, S 00-34-20 W 204.78 FT, S
89-25-40E 1019.23 FT TO POB SEC 5
T2N191W CITY OF MASON. 4.17 ACRES

ZONING:

EXISTING PARCEL ZONING: C2
PROPOSED PARCEL ZONING: C2
ADJACENT PARCEL ZONING: C2

BUILDING REQUIREMENTS:
FRONT SETBACK = 50'
SIDE SETBACK = 10'
SIDE SETBACK = 10'
REAR SETBACK = 10'
MAXIMUM BUILDING HEIGHT = 45'

BUFFER REQUIREMENTS:
BUFFER = ZONE A
C2 = 5'

ZONING DISTRICT AND ORDINANCE SECTION	C-2: GENERAL COMMERCIAL DISTRICT SEC. 94-142	
LOT AND BUILDING DIMENSIONAL REQUIREMENTS - TABLES 100-1 AND 100-2	REQUIRED	PROPOSED
MINIMUM LOT SIZE (SQ. FEET)	20,000	186,275
MINIMUM LOT WIDTH (FEET)	100	204
MINIMUM LOT AREA PER PRINCIPAL STRUCTURE (SQ. FEET)	-	-
MINIMUM FRONT YARD SETBACK (FEET)	50(11)	59
MINIMUM SIDE YARD SETBACK (FEET)	10(3)	MAIN BLDG N = 62 MAIN BLDG S = 23 ACCESSORY BLDG N = 161 ACCESSORY BLDG S = 11
MINIMUM REAR YARD SETBACK (FEET)	10(3)	MAIN BLDG = 673 ACCESSORY BLDG = 538
MAXIMUM % OF LOT COVERAGE BY ALL STRUCTURES	50%	7% (12,628 SF)
MAXIMUM HEIGHT PRINCIPAL STRUCTURE (FEET) *MAIN BUILDING*	45	PER ASSESSOR RECORD, AVERAGE HEIGHT = 14 FT.
MAXIMUM HEIGHT PRINCIPAL STRUCTURE (FEET) *GARAGE*	15	PER ASSESSOR RECORD, AVERAGE HEIGHT = 14 FT.

SYMBOLS

- ABANDONED MANHOLE
- PR/EX COMBINED MANHOLE
- PR/EX STORM MANHOLE/CATCHBASIN
- PR/EX STORM CATCH BASIN (CURB)
- PR/EX FLARED END SECTION
- PR/EX STORM DOWNSPOUT
- PR/EX SANITARY MANHOLE
- PR/EX SANITARY CLEANOUT
- PR/EX WATER MANHOLE
- PR/EX WATER VALVE
- PR/EX WATER CURB STOP
- PR/EX WATER SPRINKLER
- PR/EX MONITORING WELL
- PR/EX FIRE HYDRANT
- PR/EX UTILITY RISER
- PR/EX COMMUNICATIONS MANHOLE
- PR/EX GAS VALVE
- PR/EX GAS METER
- PR/EX ELECTRIC MANHOLE
- PR/EX ELECTRIC POWER POLE
- PR/EX ELECTRIC POWER POLE GUY WIRE
- PR/EX ELECTRIC TRANSFORMER
- UTILITY HANDHOLE
- PR/EX LIGHT POLE
- PR/EX POWER POLE WITH LIGHT FIXTURE
- PR/EX FLOOD LIGHT
- PR/EX DECIDUOUS TREE
- PR/EX CONIFEROUS TREE
- STUMP
- PR/EX PARKING METER
- PR/EX MAILBOX
- PR/EX AC UNIT
- PR/EX SIGN
- PR/EX FLAG POLE
- PR/EX BENCH
- PR/EX BIKE RACK
- PR/EX PARKING SPACE COUNT
- PR/EX CONC BALLARD
- TRAFFIC LIGHT
- ITEM TO BE REMOVED
- FOUND MONUMENTATION
- SET CAPPED IRON ROD #
- SECTION CORNER
- SOIL BORING
- BENCHMARK
- SOIL XXX
- SOIL CLASSIFICATION (NCRS)
- SURFACE DRAINAGE PATH DIRECTION

LEGEND

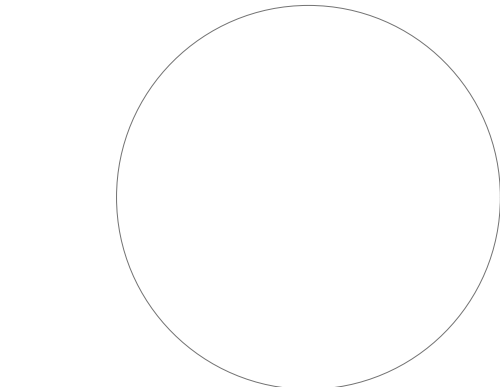
ABBREVIATIONS

- BC BACK OF CURB
- BIT BITUMINOUS
- BLD BUILDING
- BLK BULKHEAD
- BB BOTTOM OF BANK
- C CALCULATED
- CL CENTERLINE
- CB CATCH BASIN
- CO CLEAN OUT
- CMB COMBINED
- CONC CONCRETE
- ELEC ELECTRIC
- EL ELEVATION
- ENC ENCROACHMENT
- EOM EDGE OF METAL
- EX EXISTING
- FC FACE OF CURB
- FS FINISH SURFACE
- FES FLARED END SECTION
- FL FLOW LINE
- FOIR FOUND CAPPED IRON ROD
- GAS GAS LINE
- LF LINEAR FEET
- LS LANDSCAPE
- MH MANHOLE
- (M) MEASURED
- MON MONUMENT
- NO NUMBER
- OC ON CENTER
- OS OFFSET
- PL PROPERTY LINE
- PR PROPOSED
- (R) RECORDED
- POB POINT OF BEGINNING
- POL POINT ON LINE
- R.O.W. RIGHT-OF-WAY
- SAN SANITARY
- SF SQUARE FEET
- STM STORM
- TB TOP OF BANK
- TC TOP OF CURB
- TR TOP OF RETAINING WALL
- TW TOP OF WALK
- TYP TYPICAL
- WTR WATER

LINE TYPES

- PR/EX CURB AND GUTTER
- PR/EX MAJOR CONTOUR
- PR/EX MINOR CONTOUR
- PR/EX STORM SEWER
- PR/EX SANITARY SEWER
- PR/EX UNDERGROUND ELECTRIC LINE
- PR/EX OVERHEAD ELECTRIC LINE
- PR/EX GAS LINE
- PR/EX WATER LINE
- PR/EX COMMUNICATION LINE
- PR/EX STEAM LINE
- PR/EX TREE LINE
- PR/EX FENCE
- RIGHT-OF-WAY
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- HISTORICAL PROPERTY LINE
- EASEMENT
- SETBACK
- SECTION LINE
- SILT FENCE
- DISTURBANCE LIMITS
- RUNOFF AREA
- SOIL TYPE CONTOURS (NCRS)
- CURB REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE REMOVAL
- CONCRETE HATCHING
- BITUMINOUS PAVEMENT HATCHING
- STONE LANDSCAPE HATCHING
- MULCHED LANDSCAPE HATCHING

I HEREBY CERTIFY THAT THESE PLANS HAVE BEEN
PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE
WITH ACT 240, PA OF 1937 AS AMENDED.



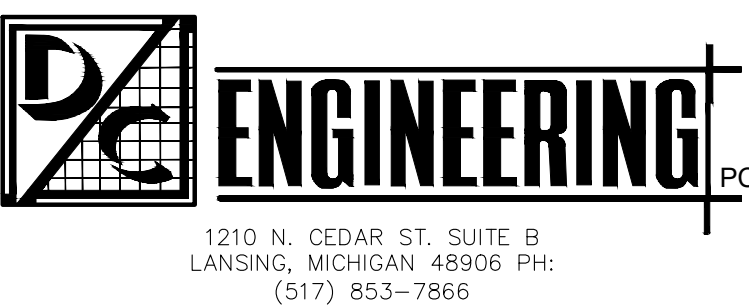
Kurt R. Krahulik
LICENSE NO. 046794
DC ENGINEERING
1210 N. CEDAR ST, SUITE B
LANSING, MI 48906
(517) 853-7866

DATE

OWNER	SEVOR PROPERTIES LLC 11108 EDEN TRAIL EAGLE, MI 48822
ARCHITECT	TBD
ENGINEER	DC ENGINEERING PC 1210 NORTH CEDAR ST, SUITE B LANSING, MICHIGAN 48906 (517) 852-7866
CONTRACTOR	TBD



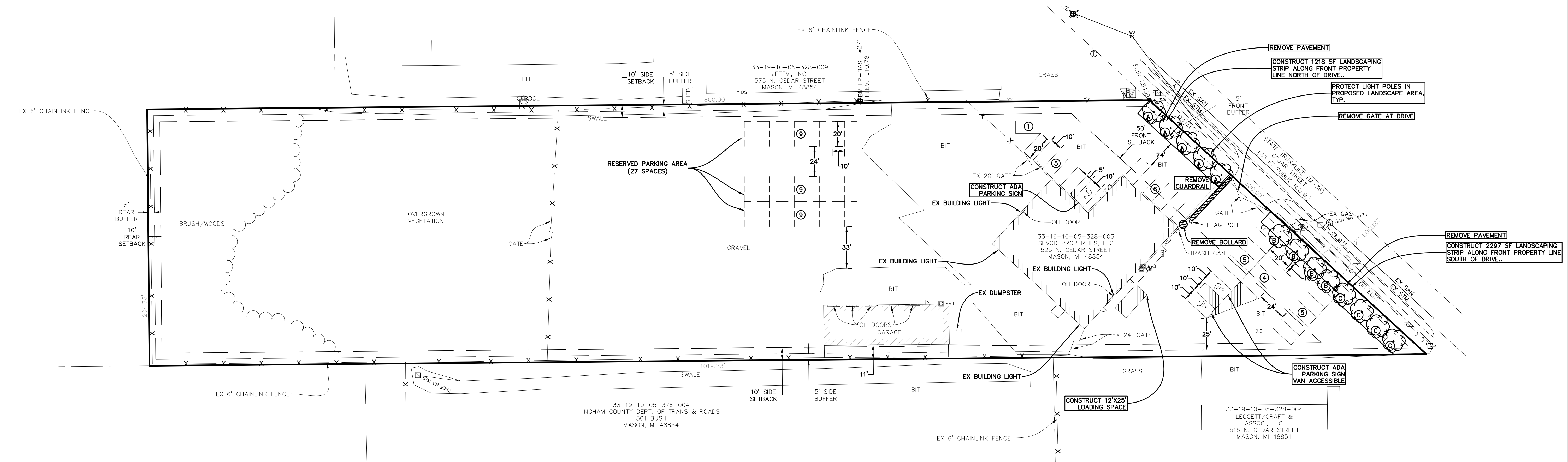
REVISIONS



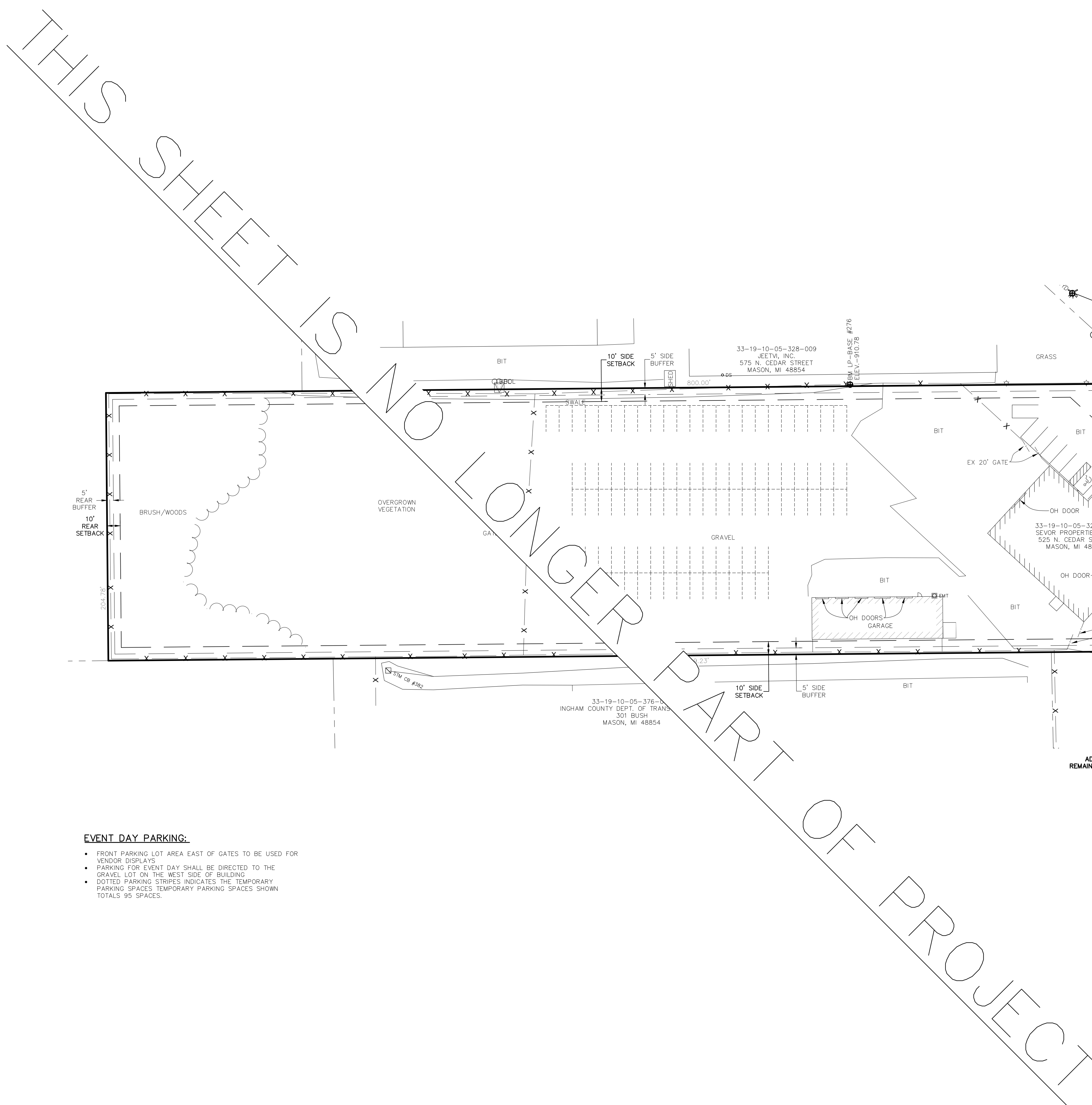
525 N CEDAR
CIVIL - COVER

PLANS PREPARED FOR:
TIMELESS TREASURES
2563 LAMB RD
MASON, MI 48854
(517)-202-6637

SCALE: NONE	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-03-25		SHEET: 1 OF 3

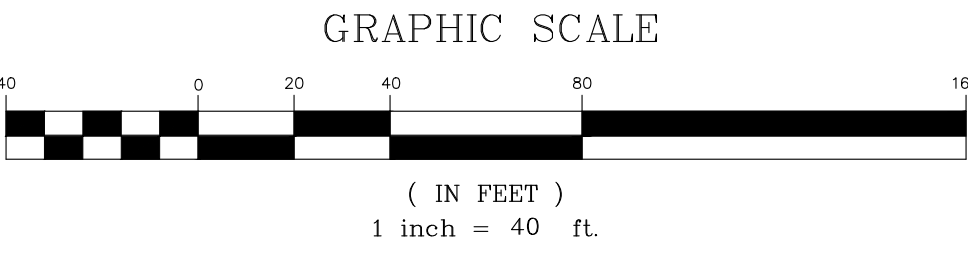


TIMELESS TREASURES - 525 N CEDAR



EVENT DAY PARKING:

- FRONT PARKING LOT AREA EAST OF GATES TO BE USED FOR VENDOR DISPLAYS
- PARKING FOR EVENT DAY SHALL BE DIRECTED TO THE GRAVEL LOT ON THE WEST SIDE OF BUILDING
- DOTTED PARKING STRIPES INDICATES THE TEMPORARY PARKING SPACES TEMPORARY PARKING SPACES SHOWN TOTALS 95 SPACES.



REVISIONS

1210 N. CEDAR ST. SUITE B
LANSING, MICHIGAN 48906
PH: (517) 853-7866

525 N CEDAR
CIVIL - SITE PLAN - EVENT DAY

PLANS PREPARED FOR:
TIMELESS TREASURES
2563 LAMB RD
MASON, MI 48854
(517)-202-6637

SCALE: 1" = 40'	DRAWN BY: EGS	REVIEWED BY: KRK
DATE: 2019-03-25		SHEET: 3 OF 3

Call MISS DIG
3 full working days before you dig:
Michigan's One-Call Utility Notification Organization
1-800-482-7171
on the net at: www.missdig.org

TIMELESS TREASURES - 525 N CEDAR

525 N. CEDAR ST.

MASON, MI 48854

GENERAL NOTES

1. NO WORK SHALL COMMENCE ON THIS PROJECT UNTIL ALL REQUIRED PERMITS ARE EXECUTED BY LOCAL BUILDING AUTHORITIES. FAILURE TO COMPLY MAY RESULT IN REMOVAL OF WORK-IN-PLACE FOR INSPECTION AND / OR CODE COMPLIANCE. ALL COST ASSOCIATED WITH REMOVAL, CHANGES, AND RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. DO NOT SCALE THESE DRAWINGS

3. ALL WORK ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES.

4. DEFECTS IN SERVICE:
THE OWNER SHALL PROMPTLY REPORT TO STUDIO [INTRIGUE] ARCHITECTS ANY DEFECTS OR SUSPECTED DEFECTS IN THE SERVICES OF WHICH THE OWNER BECOMES AWARE, SO THAT STUDIO [INTRIGUE] ARCHITECTS MAY TAKE MEASURES TO MINIMIZE THE CONSEQUENCES OF SUCH A DEFECT. THE OWNER FURTHER AGREES TO IMPOSE A SIMILAR NOTIFICATION REQUIREMENT ON ALL CONTRACTORS IN ITS OWNER/CONTRACTOR CONTRACT AND SHALL REQUIRE ALL SUBCONTRACTS AT ANY LEVEL TO CONTAIN A LIKE REQUIREMENT. FAILURE TO NOTIFY SHALL RELIEVE STUDIO [INTRIGUE] ARCHITECTS OF THE COSTS OF REMEDYING THE DEFECTS ABOVE THE SUM SUCH REMEDY WOULD HAVE COST HAD PROMPT NOTIFICATION BEEN GIVEN WHEN SUCH DEFECTS WERE FIRST DISCOVERED.

5. DESIGN / DOCUMENT OWNERSHIP:
DRAWINGS, DESIGN & SPECIFICATIONS, AS INSTRUMENTS OF SERVICE, AS WELL AS THE DESIGN OF ANY WORK PRODUCED BY STUDIO [INTRIGUE] ARCHITECTS SHALL REMAIN THE PROPERTY OF STUDIO [INTRIGUE] ARCHITECTS WHETHER THE PROJECT WHICH THEY ARE INTENDED FOR IS EXECUTED OR NOT. STUDIO [INTRIGUE] ARCHITECTS HOLDS THE COPYRIGHT AND ANY AND ALL RIGHTS ASSOCIATED THEREWITH FOR THE INSTRUMENTS OF SERVICES AND THE FINISHED WORK, INCLUDING THE RIGHT TO SELL, PUBLISH, MAKE DERIVATIVE WORKS OR USE IN ANY MANNER DESIRED. THE CLIENT OF STUDIO [INTRIGUE] ARCHITECTS SHALL BE PERMITTED TO OBTAIN COPIES OF THESE INSTRUMENTS OF SERVICE FOR THEIR USE IN THE OCCUPANCY AND PLANNING OF THIS PROJECT. THE DRAWINGS, SPECIFICATIONS AND/OR DESIGN SHALL NOT BE USED BY THE CLIENT OF STUDIO [INTRIGUE] ARCHITECTS ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THIS PROJECT BY OTHERS EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO STUDIO [INTRIGUE] ARCHITECTS. THE CLIENT IS GRANTED A LIMITED REPRODUCTION LICENSE TO REPRODUCE DRAWINGS AND SPECIFICATIONS AS NEEDED IN THE EXECUTION OF THIS PROJECT. SHOULD THIS AGREEMENT BE TERMINATED, THE LIMITED LICENSE IS TERMINATED. IF TERMINATION IS DUE TO BREACH OF CONTRACT BY ARCHITECT, THE LICENSE IS TERMINATED, AND A NEW LICENSE SHALL BE GRANTED FOR THE CLIENT TO CONTINUE WITH A NEW DESIGN PROFESSIONAL. THE CLIENT IS NOT PERMITTED UNDER ANY CIRCUMSTANCES TO SELL, LEASE, RENT, PUBLISH OR OTHERWISE DISTRIBUTE THESE INSTRUMENTS OF SERVICE OR DESIGNS TO OTHER PARTIES WITHOUT THE EXPRESS WRITTEN CONSENT OF, AND APPROPRIATE COMPENSATION AND CREDIT TO, STUDIO [INTRIGUE] ARCHITECTS.

6. ELECTRONIC DOCUMENTS:
THE CLIENT OF STUDIO [INTRIGUE] ARCHITECTS HAS NOT BEEN GRANTED A LICENSE TO OBTAIN, UTILIZE OR DISTRIBUTE ELECTRONIC FILES CONTAINING INSTRUMENTS OF SERVICE OR DESIGNS OF STUDIO [INTRIGUE] ARCHITECTS WITHOUT THE EXPRESS WRITTEN AGREEMENT OF, AND APPROPRIATE COMPENSATION TO: STUDIO [INTRIGUE] ARCHITECTS.

7. CONSTRUCTION MEANS AND METHODS:
CONSTRUCTION MEANS AND METHODS ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR FOR THE PROJECT. STUDIO [INTRIGUE] ARCHITECTS ASSUMES NO RESPONSIBILITY FOR THE CONSTRUCTION MEANS AND METHODS PROVIDED BY THE CONTRACTOR, NOR SHALL ANY REVIEW OR OBSERVATION OF WORK BY STUDIO [INTRIGUE] ARCHITECTS RELIEVE THE CONTRACTOR OF THAT RESPONSIBILITY.

8. CONSTRUCTION OBSERVATION:
UNDER THIS AGREEMENT, CONSTRUCTION OBSERVATION, IF PROVIDED IN THE PROPOSAL BY STUDIO [INTRIGUE] ARCHITECTS, IS INTENDED SOLELY TO MONITOR GENERAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS PRODUCED BY STUDIO [INTRIGUE] ARCHITECTS AND IS NOT A GUARANTEE THAT THE CONTRACTOR HAS PROPERLY PERFORMED ITS WORK. A SEPARATE WRITTEN AGREEMENT DETAILING THE EXTENT OF OBSERVATION AND/OR INSPECTION MAY BE PROVIDED, IF DESIRED. IN THE ABSENCE OF ANY SUCH OVERRIDING AGREEMENT, THE CONDITIONS STATED ABOVE SHALL REMAIN IN EFFECT.

9. REQUEST FOR CLARIFICATION OR INTERPRETATION:
THE OWNER'S AGREEMENT WITH THE CONTRACTOR SHALL STATE THAT THE CONTRACTOR MAY, AFTER EXERCISING DUE DILIGENCE TO LOCATE REQUIRED INFORMATION, REQUEST FROM STUDIO [INTRIGUE] ARCHITECTS, LLC CLARIFICATION OR INTERPRETATION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. STUDIO [INTRIGUE] ARCHITECTS, LLC SHALL, WITH REASONABLE PROMPTNESS, RESPOND TO SUCH CONTRACTOR'S REQUESTS FOR CLARIFICATION OR INTERPRETATION. HOWEVER, IF THE INFORMATION REQUESTED BY THE CONTRACTOR IS APPARENT FROM FIELD OBSERVATIONS, IS CONTAINED IN THE CONTRACT DOCUMENTS OR IS REASONABLY INFERRABLE FROM THEM, THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR ALL REASONABLE COSTS CHARGED BY STUDIO [INTRIGUE] ARCHITECTS, LLC TO THE OWNER FOR THE ADDITIONAL SERVICES REQUIRED TO PROVIDE SUCH INFORMATION.

GENERAL NOTES CONT...

10. UNAUTHORIZED CHANGES:
IN THE EVENT THE OWNER, THE OWNER'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE OWNER IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY STUDIO [INTRIGUE] ARCHITECTS WITHOUT OBTAINING PRIOR WRITTEN CONSENT OF STUDIO [INTRIGUE] ARCHITECTS, THE OWNER SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE OWNER AGREES TO WAIVE ANY CLAIM AGAINST AND TO RELEASE FROM ANY LIABILITY, STUDIO [INTRIGUE] ARCHITECTS, ARISING DIRECTLY OR INDIRECTLY FROM SUCH CHANGES.

11. STUDIO [INTRIGUE] ARCHITECTS, ITS CONSULTANTS, OFFICERS AND EMPLOYEES ARE NOT RESPONSIBLE FOR JOB SITE SAFETY PRECAUTIONS, COMPLIANCE, MEANS/METHODS. JOB SAFETY IS THE FULL RESPONSIBILITY OF THE GENERAL CONTRACTOR.

12. ALL BIDDERS MUST VISIT THE SITE TO EXAMINE THE EXISTING CONDITIONS AND ANY OBSTACLES. NO ADDITIONAL PAYMENT WILL BE APPROVED BY THE OWNER FOR CONDITIONS AND/OR OBSTACLES THAT THE BIDDER COULD HAVE IDENTIFIED THROUGH THE REQUIRED SITE VISIT.

13. CONTRACTOR SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, STATE SALES TAX AND USE TAXES TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE DOCUMENTS.

14. CONTRACTOR SHALL INCLUDE THE COST OF ALL PLAN REVIEW, BUILDING PERMITS (INCLUDING TRADE PERMITS) AND INSPECTION FEES NECESSARY TO COMPLETE THE CONSTRUCTION OF THIS PROJECT.

15. CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY UTILITIES SUCH AS WATER, ELECTRIC, HEAT, ETC. AS NECESSARY TO COMPLETE PROJECT.

16. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS, DIMENSIONS AND EXISTING CONDITIONS PRIOR TO COMMENCEMENT. PRIOR TO COMMENCEMENT OR PLACEMENT OF INTERIOR WALLS, THE CONTRACTOR SHALL COMPLETE A PRELIMINARY WALL LAYOUT ON THE FLOOR SYSTEM, NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT.

17. VERIFY LOCATION OF ALL EXISTING UTILITIES--NOTIFY OWNER OF SCHEDULE TO TURN OFF ANY UTILITIES. DRAWINGS ARE NOT INTENDED TO SHOW THE LOCATION OF UTILITIES. THOSE SHOWN OR NOTED ARE APPROXIMATE.

18. BARRICADE AND PROTECT WORK AREAS, ADJACENT WALKWAYS AND ACCESSES TO PROTECT WORKMEN, PEDESTRIANS, ADJACENT TENANTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY PRECAUTIONS AND OBSERVATIONS.

19. AVOID ENCRoACHMENT ON ADJACENT PROPERTIES OR TENANT SPACES. THE GENERAL CONTRACTOR SHALL REPLACE AND/OR REPAIR DAMAGE TO ADJACENT PROPERTIES OR TENANT SPACES RESULTING FROM ENCRoACHMENT DURING CONSTRUCTION OPERATIONS.

20. KEEP ALL DRIVE LANES AND BUILDING EXITS CLEAN AND CLEAR AT ALL TIMES.

21. STRUCTURAL COMPONENTS SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE ARCHITECT.

22. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GENERAL CLEANING DUTIES TO REMOVE ALL DEBRIS ASSOCIATED WITH THE DEMOLITION INCLUDING, BUT NOT LIMITED TO: LOT SWEEPING, INSPECTION / REPLACEMENT OF HVAC FILTERS, DUSTING, WINDOW CLEANING, ETC.

23. NOT USED.

24. PENETRATIONS
PENETRATIONS THROUGH UNRATED ROOF/CEILING AND FLOOR/CEILING ASSEMBLIES SHALL HAVE THE ANNULAR SPACE AROUND THE PENETRATION FILLED IN ACCORDANCE WITH 2015 MBC 714.5 TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION.

PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL BE PROTECTED BY UL LISTED FIRE-STOPPING SYSTEMS IN ACCORDANCE WITH 2015 MBC 714.

25. NOT USED.

26. INTERIOR COLORS AND FINISHES SHALL BE SELECTED BY THE TENANT.

27. NOT USED. .

28. WOOD FRAMING SHALL BE FIRE STOPPED SO THAT VERTICAL & HORIZONTAL CAVITIES DO NOT EXCEED 10'-0"

29. NOT USED.

30. NOT USED.

31. INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF 2015 MBC 803.

THE CORRIDOR (AND CONTIGUOUS SPACES) SHALL HAVE MINIMUM CLASS B WALL AND CEILING FINISHES - FLAME SPREAD OF 26-75; SMOKE-DEVELOPED 0-450.

ROOMS AND ENCLOSED SPACES SHALL HAVE MINIMUM CLASS C WALL AND CEILING FINISHES - FLAME SPREAD OF 76-200; SMOKE-DEVELOPED 0-450.

GENERAL NOTES CONT...

32. ALL FLOOR SURFACES SHALL BE SLIP RESISTANT AND SECURELY ATTACHED IN ACCORDANCE WITH 2015 MBC 1003.4. THE STATIC COEFFICIENT OF FRICTION FOR ALL FLOOR SURFACES SHALL BE 0.6 MINIMUM.

33. PROVIDE ADEQUATE CLEARANCES FOR SERVICING OF EQUIPMENT PER CODE.

34. PROVIDE ALL NECESSARY NAILERS, BLOCKING AND GROUNDS AS REQUIRED TO SUPPORT HANDRAILS, GUARDRAILS, WINDOW COVERINGS, DOORSTOPS, WALL MOUNTED CABINETS, ETC. SET WORK PLUMB, LEVEL AND ACCURATELY CUT.

35. GRAB BARS INSTALLED IN THE TOILET ROOMS SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LOAD OF 250 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT.

36. ALL WATER FAUCETS SHALL MEET ICC/ANSI REQUIREMENT FOR OPERABLE PARTS - OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, FINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.

37. TOILET ROOM SIGNAGE (VISUAL/TACTILE) SHALL BE LOCATED ALONGSIDE THE DOOR ON THE LATCH SIDE. TOILET ROOM SIGNAGE SHALL BE MOUNTED SO THAT THE BASELINE OF THE VISUAL CHARACTERS IS 48" TO 60" ABOVE THE ADJACENT FLOOR SURFACE.

38. EACH PANE OF TEMPERED GLAZING SHALL BE LABELED TO SPECIFY THE LABELER, THE SAFETY GLAZING STANDARD, THE TYPE AND THE THICKNESS. THE LABEL SHALL BE ACID-ETCHED, SAND BLASTED, CERAMIC FIRED, OR EMBOSSED, OR SHALL BE OF A TYPE THAT ONCE APPLIED CANNOT BE REMOVED WITHOUT BEING DESTROYED

39. ALL FIRE EXTINGUISHER LOCATIONS SHOWN ARE APPROXIMATE. EXTINGUISHERS LOCATED IN PUBLIC AREAS SHALL BE INSTALLED IN SEMI-RECESSED CABINETS (PROJECTION NOT TO EXCEED 4"). EXTINGUISHERS IN NONPUBLIC AREAS (HVAC CLOSETS, STORAGE ROOMS, EQUIPMENT ROOMS) SHALL BE BRACKET-MOUNTED. ALL FIRE EXTINGUISHER LOCATIONS AND MOUNTING HEIGHTS SHALL BE APPROVED BY THE LOCAL FIRE MARSHAL PRIOR TO INSTALLATION.

40. WHERE REQUIRED BY THE LOCAL FIRE MARSHAL, A KNOX BOX SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING.

41. NOT USED.

42. NOT USED.

43. BRAILLE EXIT SIGN FLAGARDS TO BE LOCATED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY, AND THE EXIT DISCHARGE IN ACCORDANCE WITH SECTION 1013.4 OF THE 2015 MBC AND COMPLYING WITH ICC A117.1.

44. CONTRACTOR SHALL PROVIDE ACCESS OR ACCESS PANELS TO ALL VALVES, DAPERS AND OTHER NECESSARY UTILITY ADJUSTMENT ITEMS.

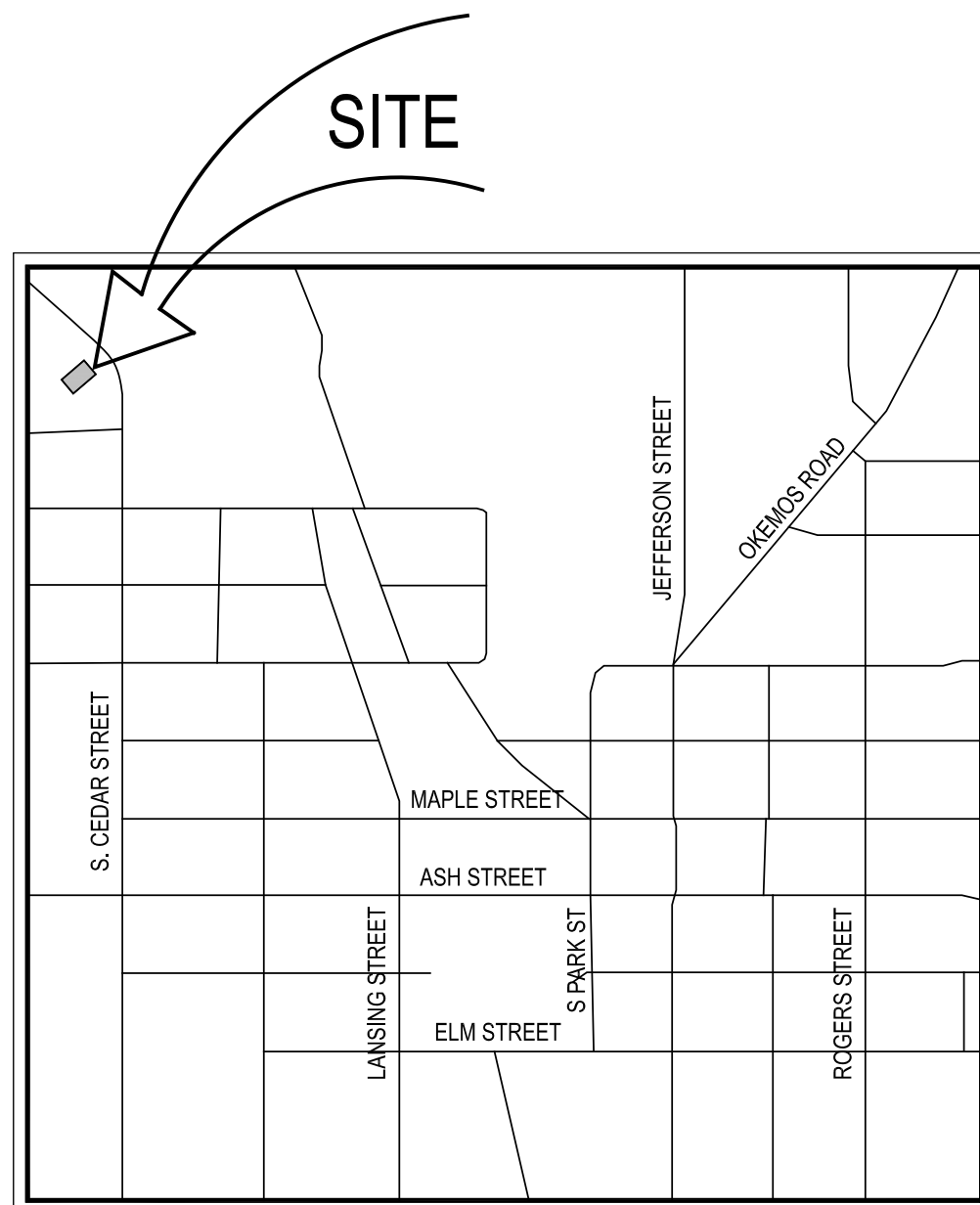
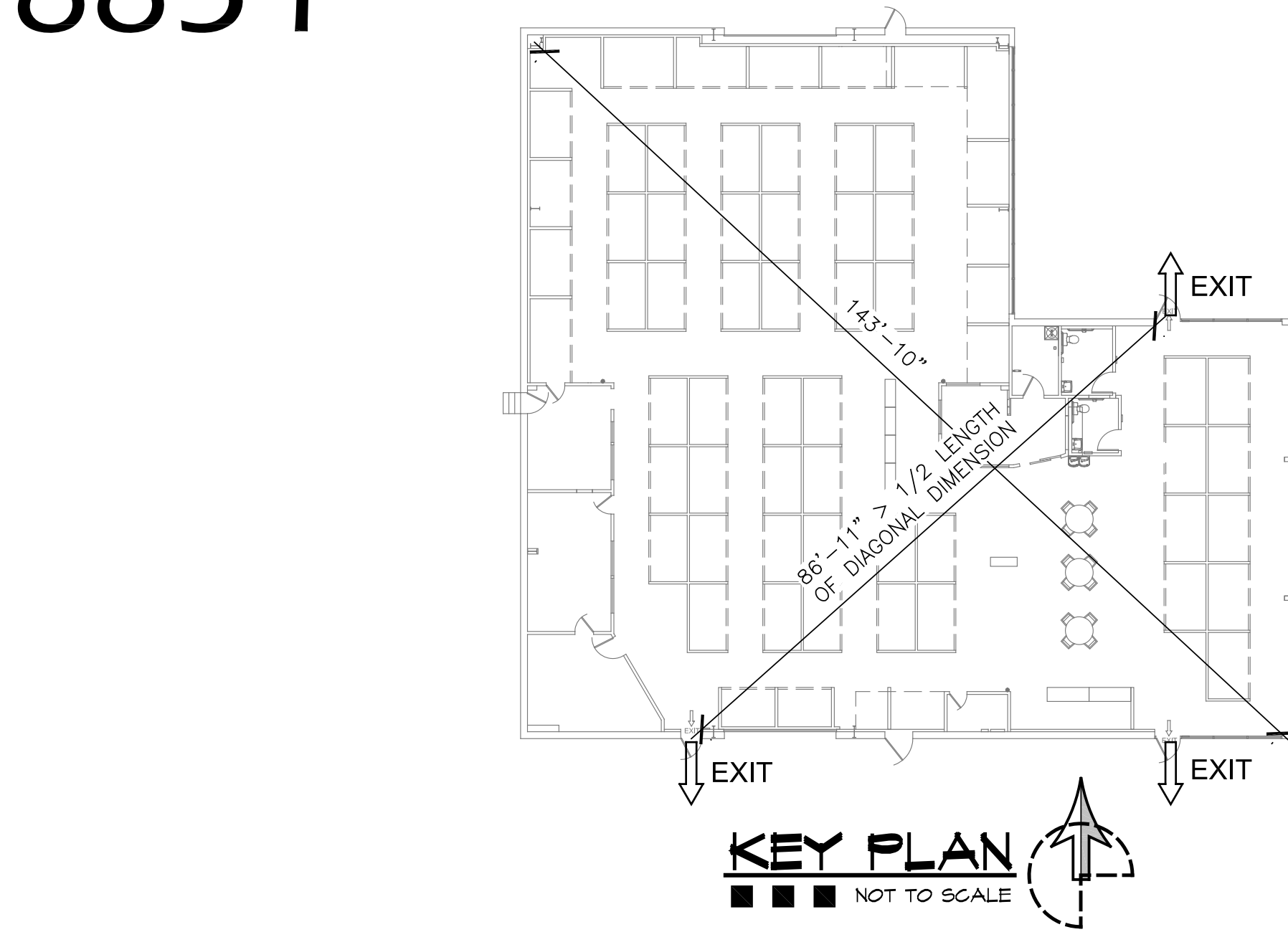
45. NOT USED.

46. GYPSUM BOARD MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1396.

47. GYPSUM BOARD MATERIALS USED IN FIRE RATED ASSEMBLIES SHALL CONFORM TO THE REQUIREMENTS OF THE UL ASSEMBLIES LISTED.

APPLICANT/GENERAL CONTRACTOR TO BE DETERMINED

ARCHITECT
STUDIO [INTRIGUE] ARCHITECTS, LLC
KENNETH L. JONES, II, AIA, NCARB
LICENSE # 1301054003 (EXP. 10/31/19)
1114 S. WASHINGTON AVE., #100
LANSING, MI 48910
517-372-8804 PHONE
517-372-8805 FAX
KENJ@STUDIOINTRIGUE.COM



NARRATIVE

THIS BUILDING WAS LAST USED AS A MOTORCYCLE/ATV SHOWROOM AND SERVICE FACILITY (B) BUSINESS USE.

THE PROPOSED M (MERCANTILE) USE WILL CONSIST OF VENDOR 'BOOTH'S' USED FOR RETAIL PURPOSES. AN ADDITIONAL RESTROOM IS BEING ADDED, COMPLIANT WITH THE OCCUPANT LOAD, ALONG WITH A DRINKING FOUNTAIN AND MOP SINK. EXIT SIGNAGE AND EMERGENCY LIGHTING WILL ALSO BE INSTALLED.

PROJECT DATA

APPLICABLE CODES	
BUILDING CODE	2015 MICHIGAN BUILDING CODE
MECHANICAL CODE	2015 MICHIGAN MECHANICAL CODE
PLUMBING CODE	2015 MICHIGAN PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRIC CODE (WITH STATE OF MICHIGAN PART 8 AMENDMENTS)
ENERGY CODE	2015 MICHIGAN ENERGY CODE -- 2015 ASHRAE 90.1
ACCESSIBILITY	2009 ICC/ANSI A117.1 -- 2015 MI BLDG CODE CH. II

GENERAL PROJECT DATA	
CONSTRUCTION TYPE	VB (COMBUSTIBLE)
OCCUPANCY CLASSIFICATION(S)	M (MERCANTILE)
FIRE SUPPRESSION	NONE
FIRE ALARM SYSTEM	NOT REQUIRED
MANUAL PULL STATIONS	
SMOKE DETECTION	NOT REQUIRED
ZONING	C-2 (GENERAL COMMERCIAL DISTRICT)

BUILDING AREA (INSIDE EXTERIOR WALLS PER CODE - NOT FOR LEASING)	
GROSS AREA	9,101 S.F.

AREA CALCULATIONS	
BASE TABULAR AREA IN ACCORDANCE WITH 2015 MBC TABLES 504.3 (BLDG HGT), 504.4 (NO. OF STORIES) AND 506.2 (FLOOR AREA) - 9,000 S.F. (M / TYPE VB) BUILDING AREA = 9,101 S.F. > 9,000 S.F. BASE TABULAR ***AREA INCREASE*** BUILDING IS 9,101 S.F. (INSIDE EXTERIOR WALLS)	

(M MOST RESTRICTIVE WITH A BASE TABULAR AREA OF 9,000 S.F.)

If = (F/P - 0.25) * W/30

If = (424'-7"/424'-7" - 0.25) *20/30

If = 5

Aa = 9,000 + (9,000*50)

Aa = 9,000 + 4,500

Aa = 13,500 S.F.

13,500 S.F. > 9,101 S.F. (OKAY)

OCCUPANCY CALCULATIONS

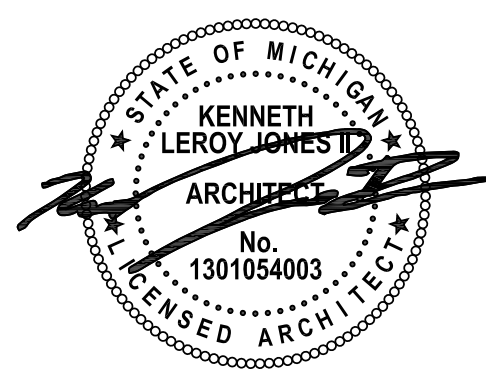
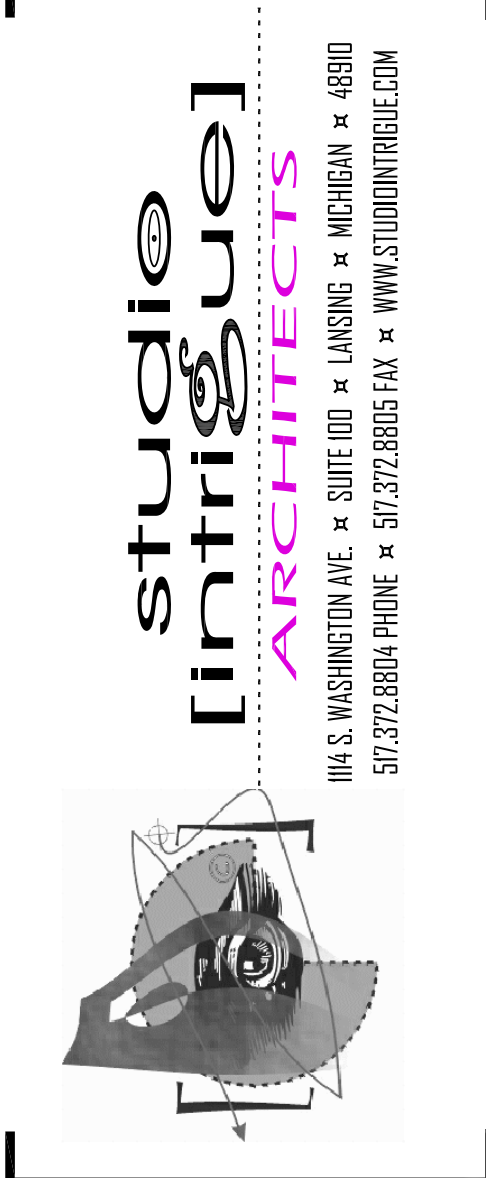
GROUP 'M' OCCUPANCY	
GROUP 'M' FLOOR AREA:	9,101 S.F. (GROSS)
TABLE 1004.1.2:	60 (GROSS) S.F. / OCCUPANT
USE OCCUPANT LOAD:	9,101 (GROSS) S.F. / 60 = 151.6 OCCUPANTS
TOTAL OCCUPANT LOAD:	152 OCCUPANTS

SHEET INDEX

SHEET	SHEET DESCRIPTION	DATE
IX	SHEET INDEX / CODE DATA / LOCATION MAP	03/01/19
BF	BARRIER FREE REFERENCE SHEET	03/01/19
D-1	DEMOLITION PLAN / DEMOLITION NOTES	03/01/19
A-1	FLOOR PLAN / ENLARGED PLAN / INTER. FINISH SCHEDULE / WALL CONST. KEY	03/01/19
P-1	SANITARY PLAN / PIPING PLAN / PLUMBING NOTES / PLUMBING FIXTURE SCHEDULE	03/01/19
E-1	GRAPHIC POWER & LIGHTING PLAN / ELECTRICAL NOTES / LIGHT FIXTURE SCHEDULE	03/01/19
E-2	EMERGENCY LIGHTING PHOTOMETRIC PLAN	03/01/19

BIDDING AND PERMITS
03/01/19

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Project Type
**INTERIOR
BUILDOUT**

Project
**525 N. CEDAR
INTERIOR
BUILDOUT**

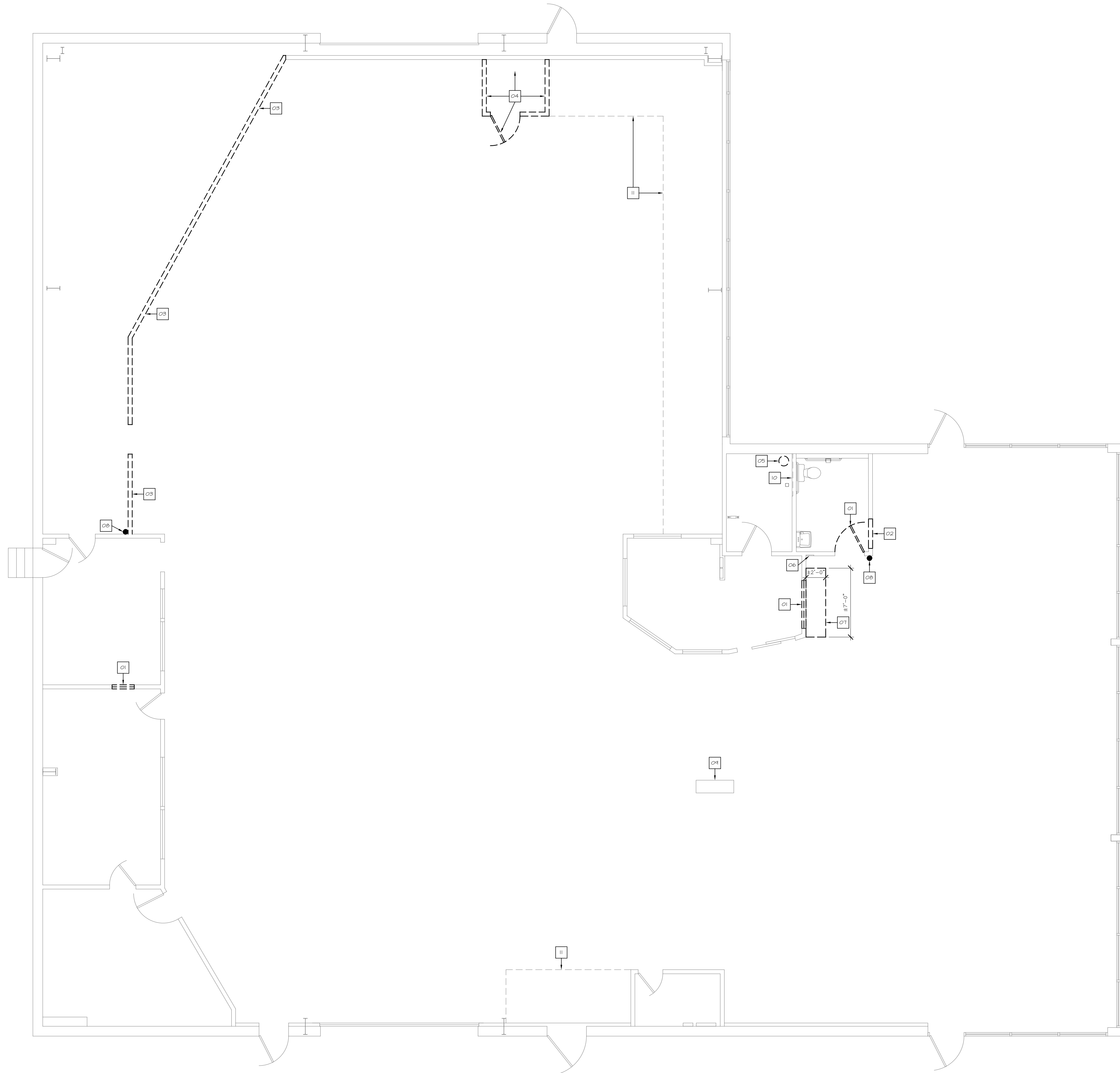
Client
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CHERRY**

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MASON, MI 48854

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Project Number
19.010

Sheet
IX



DEMO PLAN
3/16" = 1'-0"
N

DEMOLITION PLAN NOTES KEY

- 01 REMOVE EXISTING DOOR / WINDOW SYSTEM, AND PREPARE WALL FOR INFILL TO MATCH EXISTING WALL CONSTRUCTION.
- 02 REMOVE EXISTING WALL AS REQUIRED - PREPARE FOR INSTALLATION OF NEW DOOR. SEE SHEET A-1.
- 03 REMOVE EXISTING WALL CONSTRUCTION AS REQUIRED.
- 04 REMOVE EXISTING WALL, DOOR + FRAME AND PORTION OF CEILING ABOVE AS REQUIRED. PREPARE AREA FOR NEW CONSTRUCTION. SEE SHEET A-1.
- 05 REMOVE EXISTING WATER HEATER AND WATER LINES AS REQUIRED. SEE SHEET P-1 FOR EXTENT OF NEW LAYOUT.
- 06 EXISTING SANITARY AND PIPING EXPOSED. P.C. TO REMOVE AND CAP EXISTING LINES AS REQUIRED. PREPARE AREA FOR NEW CONSTRUCTION AS REQUIRED. V.I.F.
- 07 REMOVE PORTION OF EXISTING CONCRETE SLAB AS REQUIRED FOR NEW SANITARY LAYOUT. SEE SHEET P-1.
- 08 REMOVE, SALVAGE AND PREPARE EXISTING FIRE EXTINGUISHERS FOR REUSE AS REQUIRED.
- 09 EXISTING ENCLOSURE TO REMAIN.
- 10 EXISTING STUDS AND PLUMBING EXPOSED. PREPARE WALL FRAMING FOR NEW DRYWALL PATCH AS REQUIRED. V.I.F.
- 11 EXISTING OVERHEAD PLATFORM TO REMAIN.

DEMOLITION NOTES

- ALL WORK ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST FEDERAL, STATE AND LOCAL CODES.
- ALL BIDDERS MUST VISIT THE SITE TO EXAMINE THE EXISTING CONDITIONS AND ANY OBSTACLES. NO ADDITIONAL PAYMENT WILL BE APPROVED BY THE OWNER FOR CONDITIONS AND/OR OBSTACLES THAT THE BIDDER COULD HAVE IDENTIFIED THROUGH THE REQUIRED SITE VISIT.
- VERIFY EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO REMOVING EXISTING CONSTRUCTION OR ORDERING OF MATERIALS.
- VERIFY LOCATION OF ALL EXISTING UTILITIES--NOTIFY OWNER OF SCHEDULE TO TURN OFF ANY UTILITIES. DRAWINGS ARE NOT INTENDED TO SHOW THE LOCATION OF ANY UTILITIES.
- BEFORE CONTRACTOR COMMENCES WITH DEMOLITION, HE SHALL CHECK WITH ALL LOCAL UTILITIES FOR VERIFICATION OF UNDERGROUND LINES. ALL UTILITIES SHALL BE COORDINATED BETWEEN EXISTING SERVICES, PROPOSED SERVICES AND UTILITY COMPANIES. ANY ABANDONED SERVICE SHALL BE TERMINATED ACCORDING TO THE UTILITY COMPANY'S REQUIREMENTS.
- EXECUTE ALL DEMOLITION IN AN ORDERLY MANNER. PROTECT EXISTING BUILDING ELEMENTS AND UTILITIES THAT ARE TO REMAIN.
- BARRICADE AND PROTECT WORK AREAS, ADJACENT WALKWAYS AND ACCESSES TO PROTECT WORKMEN, PEDESTRIANS, ADJACENT TENANTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY PRECAUTIONS AND OBSERVATIONS.
- AVOID ENCROACHMENT ON ADJACENT PROPERTIES OR TENANT SPACES. THE GENERAL CONTRACTOR SHALL REPLACE AND/OR REPAIR DAMAGE TO ADJACENT PROPERTIES OR TENANT SPACES RESULTING FROM ENCROACHMENT DURING CONSTRUCTION OPERATIONS.
- THE GENERAL CONTRACTOR SHALL VISIT THE SITE WITH THE OWNER'S REPRESENTATIVE TO AUDIT ITEMS TO BE SALVAGED TO THE OWNER AND PROTECTED/STORED FOR REINSTALLATION.
- ALL ITEMS THAT ARE NOT BEING SALVAGED TO THE OWNER OR REINSTALLED SHALL BECOME THE PROPERTY OF THE GENERAL CONTRACTOR AND SHALL BE REMOVED FROM THE JOB SITE. DO NOT STORE OR PERMIT MATERIAL TO ACCUMULATE ON SITE.
- MATERIALS REMOVED UNDER THIS CONTRACT SHALL NOT BE ADVERTISED FOR SALE AT THE JOB SITE.
- KEEP ALL DRIVE LANES AND BUILDING EXITS CLEAN AND CLEAR AT ALL TIMES.
- ELECTRICAL SYSTEMS AND OTHER UTILITIES THAT ARE IN CONSTRUCTION NOTED TO BE DEMOLISHED SHALL BE REMOVED BACK TO THE SOURCE--DO NOT ABANDON.
- STRUCTURAL COMPONENTS SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE ARCHITECT.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GENERAL CLEANING DUTIES TO REMOVE ALL DEBRIS ASSOCIATED WITH THE DEMOLITION INCLUDING, BUT NOT LIMITED TO: LOT SWEEPING, INSPECTION / REPLACEMENT OF HVAC FILTERS, DUSTING, WINDOW CLEANING, ETC.

WALL LEGEND

- EXISTING TO REMAIN
- TO BE DEMOLISHED

BIDDING AND PERMITS
03/01/19

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Project Type
INTERIOR BUILDOUT

Project
**525 N. CEDAR
INTERIOR
BUILDOUT**

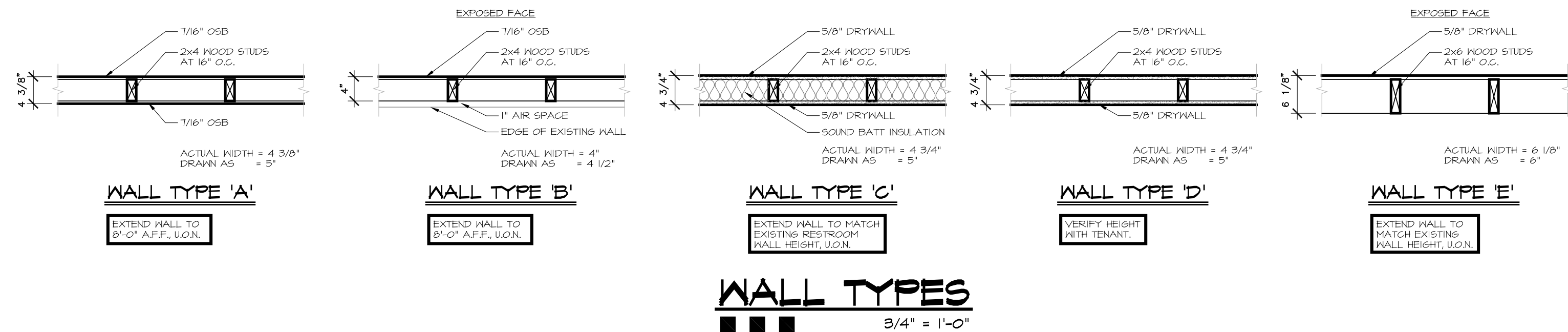
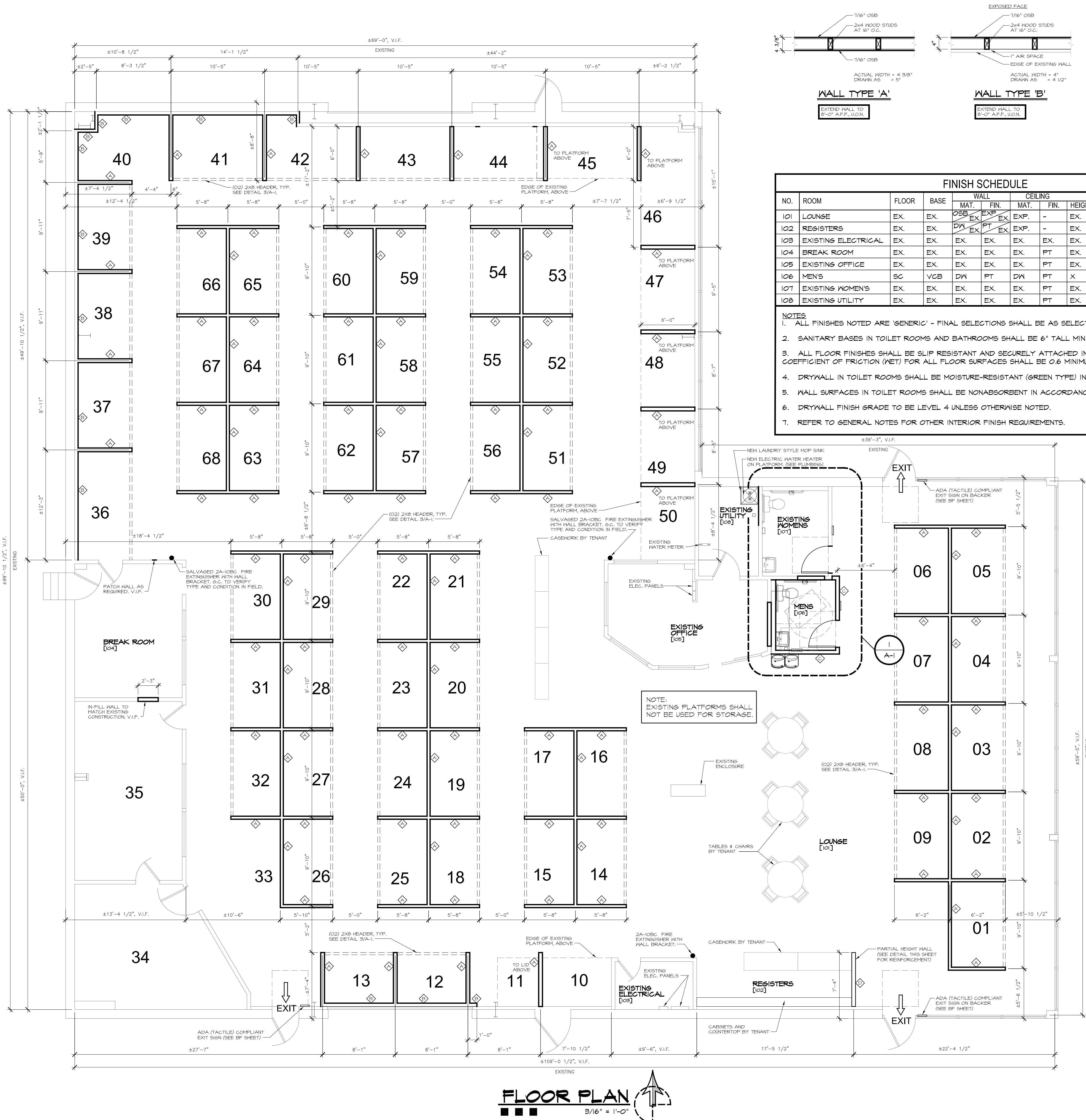
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Client
**TAVIS
CHERRY**

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MASON, MI 48854

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Project Number
19.010
Sheet
D-1



FINISH SCHEDULE										LEGEND	
NO.	ROOM	FLOOR	BASE	WALL		CEILING			REMARKS	ABBR	DESCRIPTION
				MAT.	FIN.	MAT.	FIN.	HEIGHT			
101	LOUNGE	EX.	EX.	OSB	EXP	EXP.	-	EX.	x	DW	DRYWALL
102	REGISTERS	EX.	EX.	DW	PT	EXP.	-	EX.	x	LAT	LAY-IN ACOUSTICAL TILE
103	EXISTING ELECTRICAL	EX.	EX.	EX.	EX.	EX.	EX.	EX.	x	FRP	FIBER-REINF. PLASTIC
104	BREAK ROOM	EX.	EX.	EX.	EX.	EX.	PT	EX.	x	MTL	METAL
105	EXISTING OFFICE	EX.	EX.	EX.	EX.	EX.	PT	EX.	x	PF	PREFINISHED
106	MEN'S	SC	VCB	DW	PT	DW	PT	X	x	SC	SEALED CONCRETE
107	EXISTING WOMEN'S	EX.	EX.	EX.	EX.	EX.	PT	EX.	x	VCB	VINYL COVE BASE
108	EXISTING UTILITY	EX.	EX.	EX.	EX.	EX.	PT	EX.	x	VCT	VINYL COMPOSITE TILE
										EXP.	EXPOSED
										EX.	EXISTING

NOTES

1. ALL FINISHES NOTED ARE 'GENERIC' - FINAL SELECTIONS SHALL BE AS SELECTED BY OWNER.

2. SANITARY BASES IN TOILET ROOMS AND BATHROOMS SHALL BE 6" TALL MINIMUM.

3. ALL FLOOR FINISHES SHALL BE SLIP RESISTANT AND SECURELY ATTACHED IN ACCORDANCE WITH 2015 MBC 1003.4. THE STATIC COEFFICIENT OF FRICTION (NET) FOR ALL FLOOR SURFACES SHALL BE 0.6 MINIMUM.

4. DRYWALL IN TOILET ROOMS SHALL BE MOISTURE-RESISTANT (GREEN TYPE) IN AREAS EXPOSED TO MOISTURE.

5. WALL SURFACES IN TOILET ROOMS SHALL BE NONABSORBENT IN ACCORDANCE W/ 2015 MBC 1210.2.

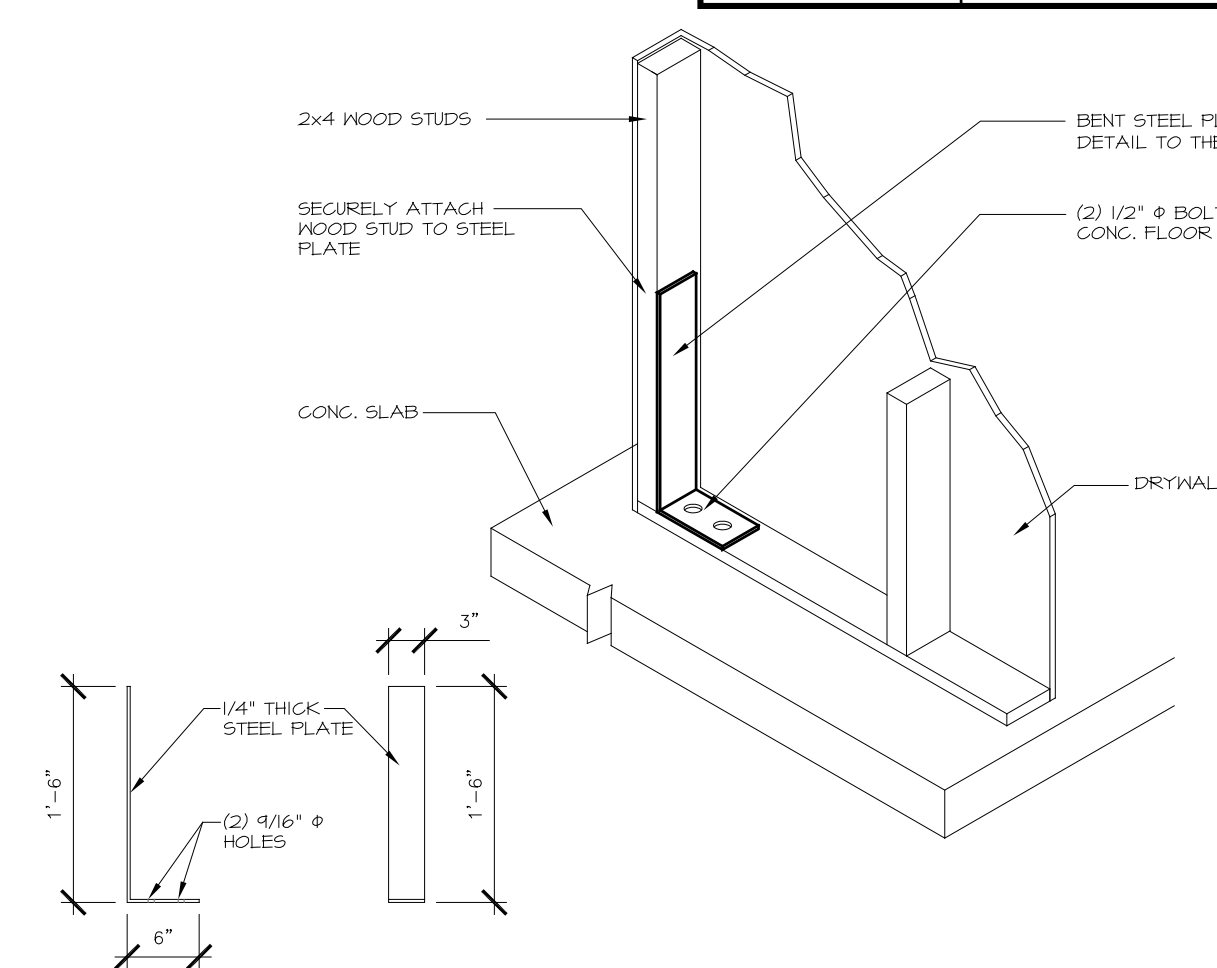
6. DRYWALL FINISH GRADE TO BE LEVEL 4 UNLESS OTHERWISE NOTED.

7. REFER TO GENERAL NOTES FOR OTHER INTERIOR FINISH REQUIREMENTS.

TOILET ACCESSORIES LEGEND	
TPD	TOILET PAPER DISPENSER
PTD	PAPER TOWEL DISPENSER/WASTE CONTAINER
MIR	MIRROR
SD	SOAP DISPENSER
GB	GRAB BAR
SND	SANITARY NAPKIN DISPOSAL
BGS	BABY CHANGING STATION

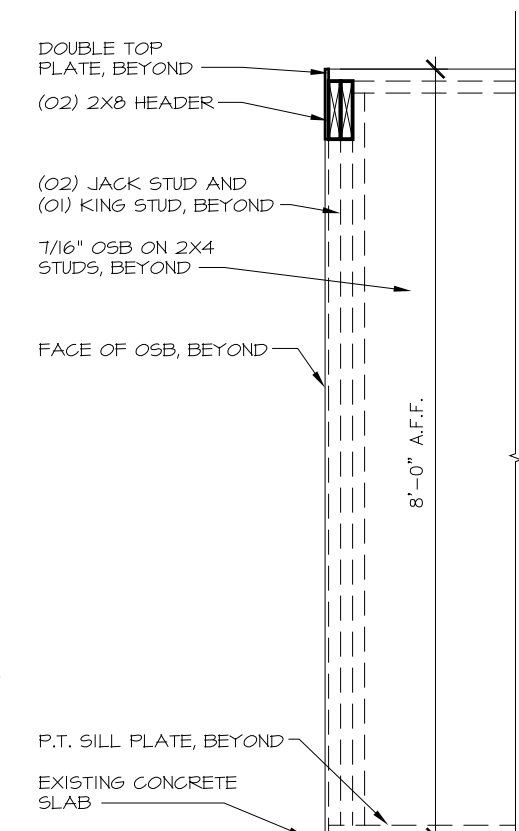
LEGEND	
◇	WALL CONSTRUCTION DESIGNATION
×	WINDOW DESIGNATION
×	DOOR DESIGNATION

WALL LEGEND	
---	EXISTING
---	NEW CONSTRUCTION

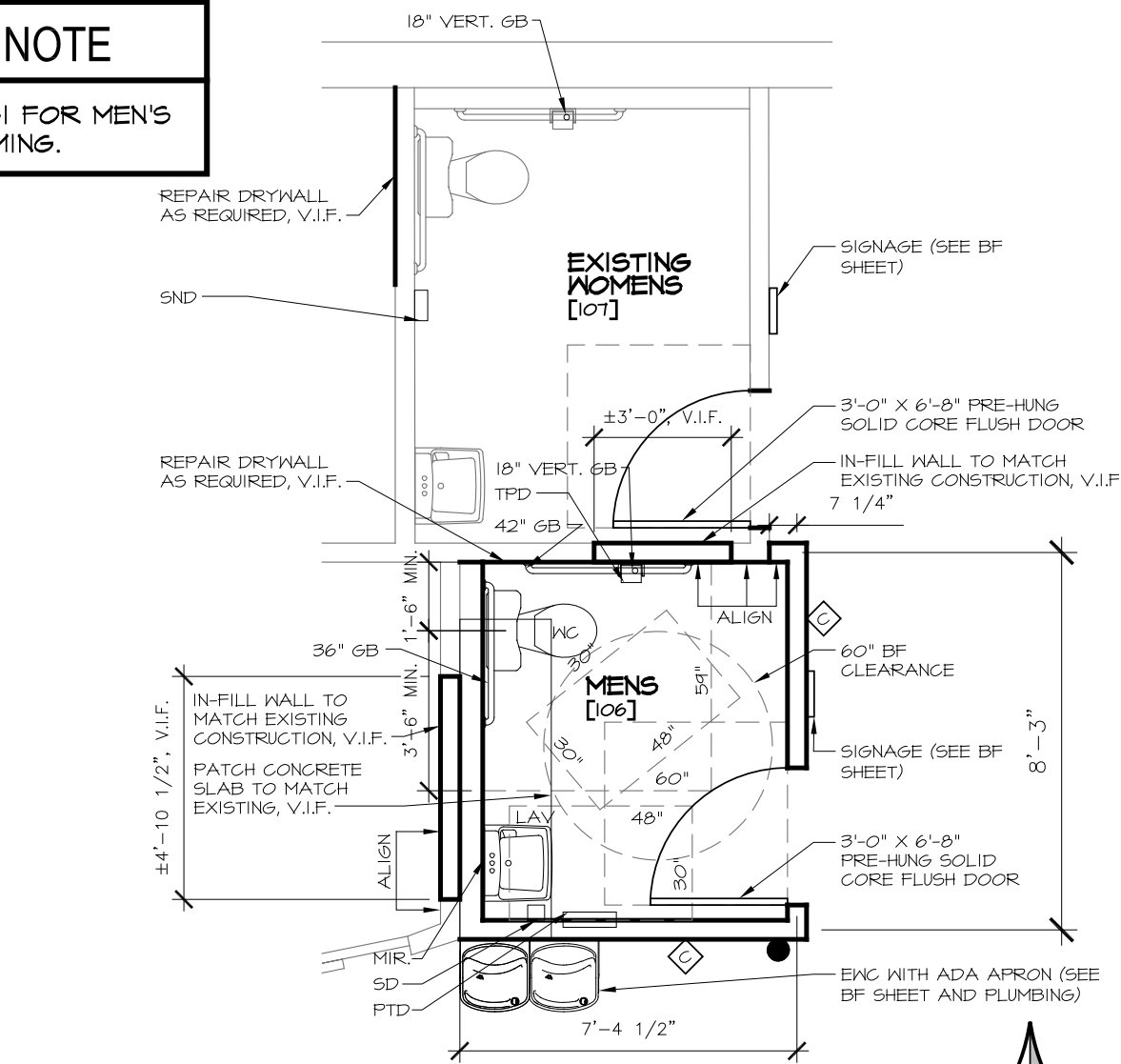


WALL REINFORCEMENT DETAIL 2
1/4" = 1'-0"

FRAMING NOTE
SEE SHEET P-1 FOR MEN'S CEILING FRAMING.



FRAMING DETAIL 3
1/2" = 1'-0"



ENLARGED FLOOR PLAN 1
1/4" = 1'-0"

OWNER REVIEW	
BIDDING AND PERMITS	
02/19/19	
03/01/19	

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Project Type
INTERIOR BUILDOUT

Project
525 N. CEDAR
INTERIOR BUILDOUT

Client
TAVIS CHERRY

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MASON, MI 48854

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Project Number
19.010

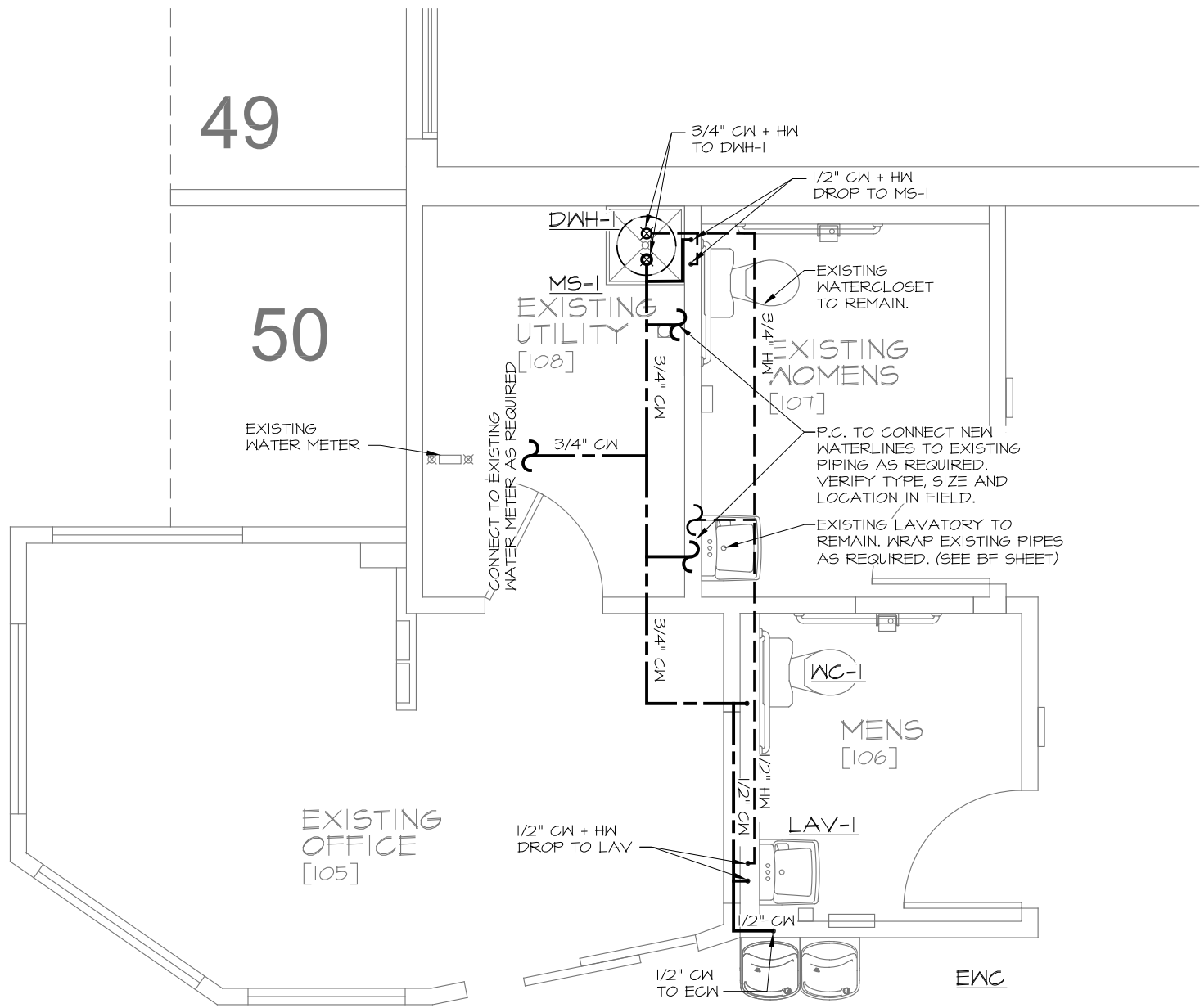
Sheet
A-1

PLUMBING FIXTURE SCHEDULE						
TAG	FIXTURE	MANUFACTURER	MODEL NO.	COLOR	FITTINGS & ACCESSORIES	NOTES
LAV-I	LAVATORY WALL HUNG UNIT	AMERICAN STANDARD	CORRADE #0124.024	WHITE	DELTA #020-1HFU	
WC-I	ADA-COMPLIANT ELONGATED BOWL	AMERICAN STANDARD	CHAMPION 4 RIGHT HEIGHT ELONGATED 2002.014	WHITE	CHROME PLATED TRIP LEVER/ TOILET SEAT WITHOUT COVER	PROVIDE RIGHT OR LEFT HAND TRIP LEVER AS REQUIRED BY ADA
DWH-I	DOMESTIC WATER HEATER	BRADFORDWHITE	RE1646-1NAL	----	TAP RELIEF VALVE	6 GALLON / 1500W ELECTRIC
ENC-I	ELECTRIC WATER COOLER H/ALON	ELKAY	L25TL05C	STAINLESS		ORDER PART #UKAPREZL TO COMPLY WITH ADA REQUIREMENTS
MS	MOP SINK	-	-	WHITE	-	TUB STYLE

NOTE: CONTRACTORS TO PROVIDE RIGHT HAND OR LEFT HAND FLUSH VALVE OR TRIP LEVER AS REQUIRED BY BARRIER FREE CODE.

PLUMBING FIXTURE NOTE

PLUMBING FIXTURES LISTED ARE
BASIS OF DESIGN. APPROVED
EQUIVALENTS MAY BE SUBSTITUTED.
VERIFY WITH TENANT..



PIPING PLAN

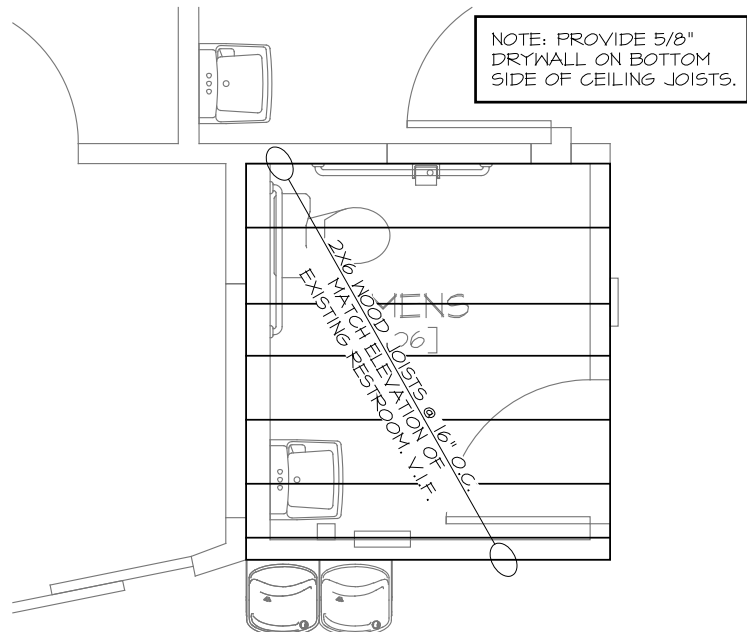
1/4" = 1'-0"

SANITARY NOTE

P.C. TO VERIFY LOCATION OF EXISTING
SANITARY UNDER CONCRETE SLAB AND
COORDINATE EXTENT OF CONCRETE SLAB
REMOVAL FOR PROPOSED CONSTRUCTION.

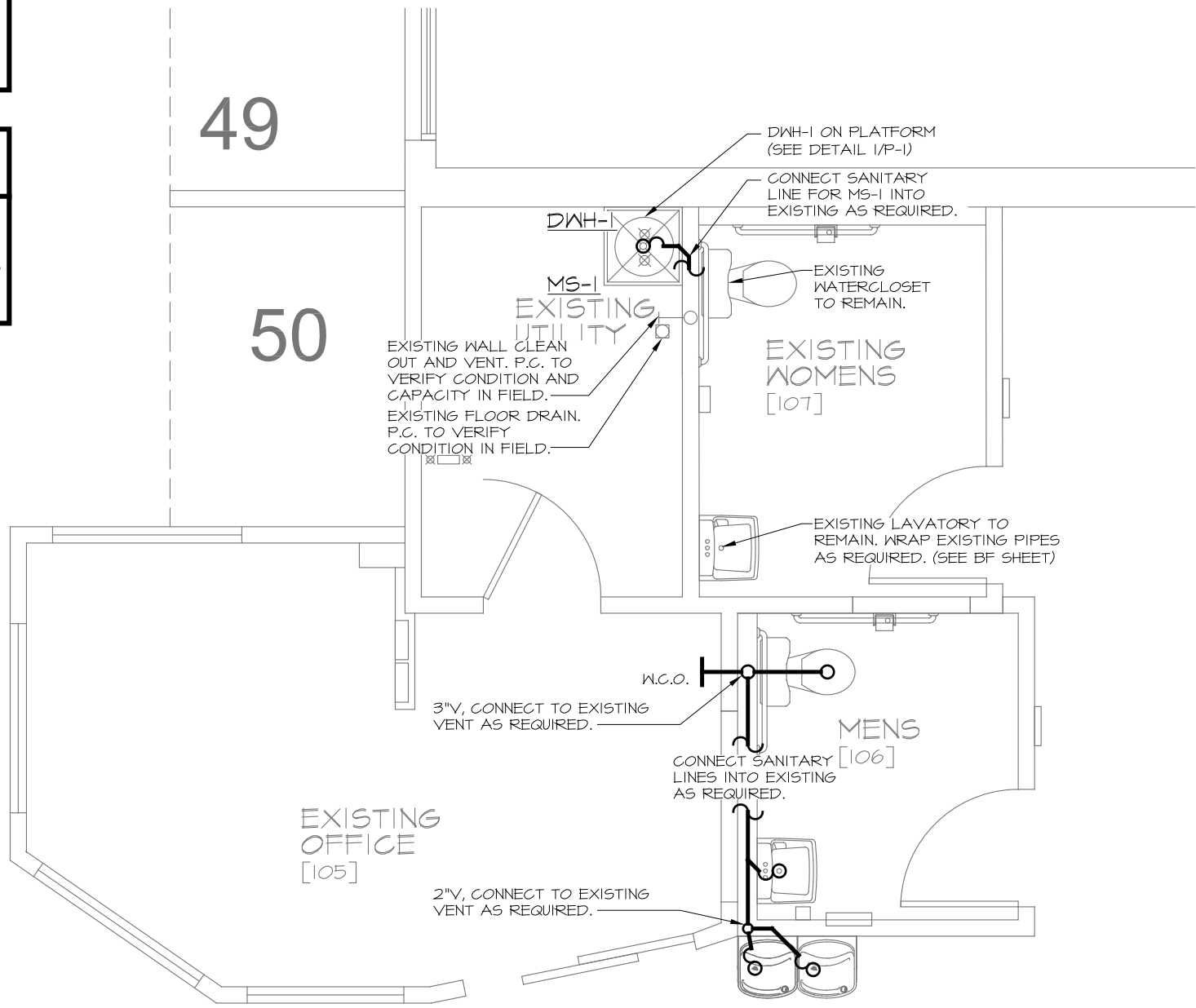
RESTROOM CEILING NOTE

PROPOSED CEILING SHALL NOT BE USED
FOR STORAGE ABOVE. THE FRAMING
MEMBERS ARE NOT DESIGNED TO SUPPORT
ANY ADDITIONAL LOADS.



CEILING FRAMING PLAN

1/4" = 1'-0"



SANITARY PLAN

1/4" = 1'-0"

PLUMBING NOTES

PROVIDE 1/2" CW TO WATER CLOSETS; 1/2"
CW & HW TO LAVATORIES. 1/2" WATER LINE
SHALL ONLY SUPPLY ONE FIXTURE..

SHUT-OFF VALVES SHALL BE INSTALLED AT
EACH FIXTURE.

PROVIDE WATER HAMMER PROTECTION AS
REQUIRED.

THE WATER SUPPLY BRANCH SHALL HAVE A
VALVE NEAR EACH DOMESTIC WATER
HEATER.

ALL WATER PIPING SHALL BE INSULATED.

WRAP ALL WATER PIPES & SANITARY TRAPS
BELOW SINKS & LAVS PER SHEET BF.

ALL WATER LINES IN EXTERIOR WALLS
SHALL BE HELD ON THE "WARM" SIDE OF THE
INSULATION

ALL WATER PIPING SHALL BE RUN WITHIN THE
CEILING FRAMING UNLESS NOTED OTHERWISE.

MIXING VALVES SHALL BE INSTALLED AT
ALL LAVS, SINKS & SHOWERS TO LIMIT THE
WATER TEMP TO 110° F.

THE WATER HEATER SHALL HAVE A MINIMUM
ENERGY FACTOR OF 0.93 (E1) AND MEET
DOE-10-CFR PART 430 TESTING
REQUIREMENTS.

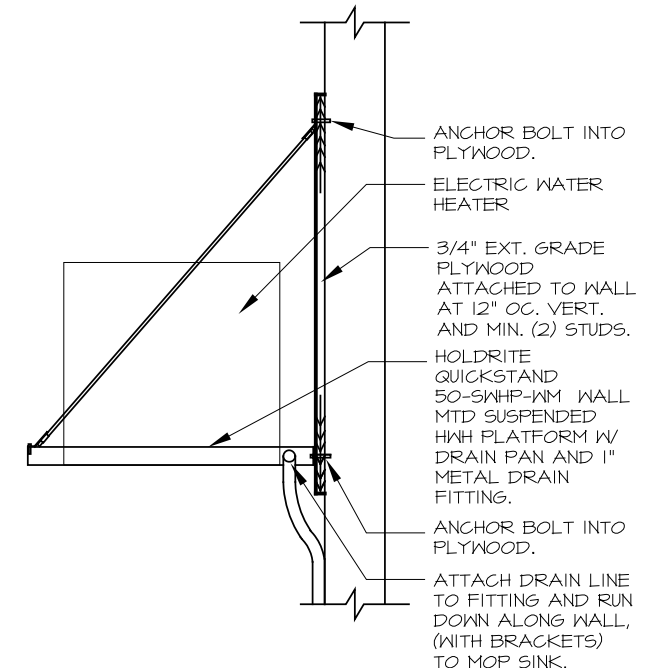
THE P.C. SHALL PROVIDE INSULATED HEAT
TRAP ON OUTLET OF WATER HEATER.

ALL WATER PIPING SHALL BE INSULATED
COPPER. PEX MAY NOT BE SUBSTITUTED.

ALL WATER PIPING IS SIZED ASSUMING
COPPER PIPING AND TANK TYPE WATER
CLOSETS. IF FLUSH VALVE WATER CLOSETS
AND PEX PIPING ARE SUBSTITUTED; P.C.
SHALL ENLARGED PIPING DIAMETERS TO
ACCOMMODATE.

PLUMBING LEGEND

---	SANITARY LINE
---	COLD WATER (CW)
---	HOT WATER (HW)
FD	FLOOR DRAIN
WC	WATER CLOSET
LAV	LAVATORY
MS	MOP SINK
ENC	ELECTRIC WATER COOLER
⌋	FIXTURE TRAP
⊙	DOMESTIC WATER HEATER



WATER HEATER
PLATFORM DETAIL

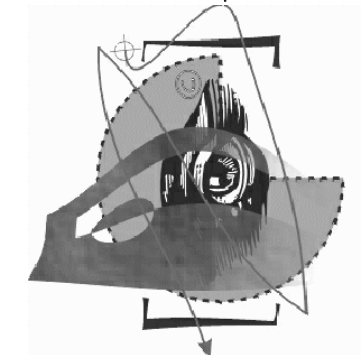
3/4" = 1'-0"

BIDDING AND PERMITS

03/01/19

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Project Type
INTERIOR
BUILDOUT

Project
525 N. CEDAR
INTERIOR
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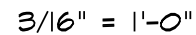
Client
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CHERRY


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Project Number
19.010

Sheet
P-1



---	EXHAUST DUCT
 CEF	CEILING EXHAUST FAN

E-1



City Manager's Report: May 3, 2019

ACTIVE PROJECTS STATUS UPDATES (PROJECTS NOT COORDINATED BY THE CITY)

Project Name	Status
318 W. Kipp - Klavon's 228 W. Kipp - Klavon's	A Temporary Certificate of Occupancy has been issued. They are open for business! Staff anticipates a Special Use/Site Plan Application for the development of the overflow parking lot in the near future.
322 S. Jefferson Commercial Bank – Downtown Mason	Two building permits are active for interior and exterior renovations to restore two entrance doors on Jefferson St.; replace door and add concrete pad at alley entrance. A third building permit is being issued for renovation of the upstairs offices.
402 S. Jefferson (former Baja Grill)	Grant Agreement has been signed. The building permit is under review.
201 W. Ash City Hall	Anticipate installation of T-Mobile equipment to begin this spring
154 W. Maple (former shoe store)	Building permit has been issued. A Right of Way Permit is under review which will include a temporary easement to use the vacant lot at the alley/Jefferson Street for staging of equipment for the project. A Letter of Intent is being issued for support of the project at a lower amount than requested. Developer is evaluating the feasibility of the project.
600 Buhl St. Ingham Animal Shelter	Building permit active for new construction.
652 Hull Rd New Goodwill	Staff anticipates a building permit application once supplemental permits from the State and County have been obtained.
400 S. Cedar St Harvey Education Center / Mason Public Schools	State building permit active for construction of new addition as part of the Phase 1 Bond Project. More information available at: http://bondprojects.masonk12.net/ .
801 N. Cedar St. (City Limits)	City Limits, has requested final site plan approval to construct a 4,828 square foot addition along with additional parking. The project is expected to be reviewed by the Planning Commission at their regular meeting on May 14.
Ash/Cedar (M-36) - MDOT	MDOT has started the signal upgrade project at the intersection of Ash and Cedar (M-36) next week. The Contractor completed installation of the signal foundations. The signals themselves and the sidewalk work will take place at a later time TBD. This 2nd phase of work will take approximately 1-2 weeks and will have the following traffic impacts: Periodic daily lane closures on M-36 for the Contractor to perform the work. The intersection will not be closed at any time and traffic will be maintained through the intersection.
Howell/Okemos Rd intersection – Ingham County Road Department	ICRD is installing a four-way stop with flashers at this intersection.
SUBDIVISIONS	<i>Subdivisions require three stages of approval before site plan approval and building permits can be issued: (1) Tentative Preliminary Plat, (2) Final Preliminary Plat, (3) Final Plat.</i>
Enclave at Rayner Ponds Subdivision (19 lots, 1 park)	The City has approved a Tentative Preliminary Plat (Stage 1) and is waiting to receive an application for Final Preliminary Plat (Stage 2).
Rayner Ponds – Phase 4 Subdivision (16 lots)	The City approved a Tentative Preliminary Plat in January of 2018 (Stage 1). Staff received an application for Final Preliminary Plat (Stage 2) in December of 2018. A public hearing was held by the Planning Commission on January 15 resulting in a recommendation for approval to City Council. City Council approved the Final Preliminary Plat on January 21, 2019. The applicant will submit a Final Plat for approval (Stage 3) next.

OPERATIONS AND COMMUNITY RELATIONS

- The Code Enforcement Officer position has been moved to Community Development from the Police Department.
- On April 11th Crp. Mentink and Off. Bradley attended a 1-day formal training in police report construction and

communication to gain additional skills and in current and best practices.

- On April 16th Off. Michele, Cert. Taser Instructor, attended a 1-day course in Michigan Taser Laws and current Policy to enhance his credential as a Taser and use-of –force instructor.
- On April 18th Off. Flores attended a 2-hour seminar to assist in recognizing and working with those with Autism who may have police contacts.
- The Police and Fire Departments responded to a fire at 622 Hall Boulevard on May 3, 2019. The City received mutual aid from Delhi Township Fire Department, Dansville Fire & Rescue, Leslie Fire Department, and Meridian Township Fire Department's RIT Team. There were no injuries, but the house is a total loss.

Staffing Updates:

- New Hires/Promotions: David Latter started as a Seasonal-Temporary Laborer May 1, 2019.
- Departures:
 - Charles Goeke, Code Enforcement Officer – Last Day 4/12/2019
 - Daniel Kennedy, Volunteer Fire Fighter – Last Day 4/18/2019
 - Bryan Keeler, Police Officer – Last Day 4/29/2019
- Open Positions: Seasonal-Temporary Laborer – All offers have been made pre-employment screening is being conducted. Full-Time Laborer position closed April 17 and applications are under review. Part-Time Custodian position closed May 1 and applications are under review.

LARGE CITY PROJECTS

FY 2018-2019			
Project	Project Name/Description	Status	Completed
STREETS, SIDEWALKS, BRIDGES (S)			
2017-S6	South St - Northbrook to City Limits	Complete	Sep
2017-S7	Avon Street - All	Complete	Sep
2017-S8	Northbrook - South to Carom Circle	Complete	Sep
2017-S9	S. Jefferson - Oak Street to Kipp Road	Cannot begin construction before June 9 per contract. Pre-Con meeting scheduled for May 8.	
2017-S10	Sidewalk Program – Downtown and Summerwood	Work downtown nearing completion; Summerwood will begin after downtown.	
2018-S1	MDOT- Temple Street Safety Grant	MDOT Grade Inspection completed. Awaiting MDOT comments and authorization to bid.	
2018-S32	Columbia - Cedar to US 127	Complete	Sep
UTILITIES: SANITARY SEWER, STORM WATER, AND WATER DISTRIBUTION (U)			
2018-U1	Utilities for Properties on Kipp Road	Complete	Sep
2017-U3.2	Waste Water Treatment Plant Upgrades	Complete	Oct
2017-U3.3	Design of the New DPW Facility	Delayed until future FY (2019-2020)	N/A
2017-U6	Abandon Wells by Airport	Delayed until future FY (2021-2022)	N/A
2017-U9	Northbrook - South to Carom Circle	Complete	Sep
2017-U10	S. Jefferson - Oak St to Kipp Road	See 2017-S9 above	
2017-U12	300,000 G Storage Tank Top Sealing	Removed, included with WWTP Upgrade Project	N/A
2017-U13	Well No. 7 Rebuild	Well work is complete. Motor drive is on order.	
2017-U15	Replace Two Fire Hydrants Behind Mason Plaza	Delayed until future FY (2019-2020)	N/A
2017-U16	Cathodic Protection for Ground Storage Tank	Delayed until future FY (2020-2021)	N/A
2017-U17	High Service Pump No. 1 Rebuild	Complete	Mar
2017-U18	Replace Chlorine Analyzer	Complete	Aug
2018-U35	BS&A Work Order Application	Award of project anticipated in May	
2018-U36	Sewer Push Camera Replacement	Complete	Nov
2018-U37	Log Jam Removal Sycamore Creek	Complete	Nov
PARKS/ CEMETERY/ FORESTRY/ NONMOTORIZED (P)			
2017-P8	Laylin Park Improvements	Staff is evaluating final work priorities for the spring.	

2018-P1	Howell Road - Hayhoe Riverwalk (Dart Trailhead)	Complete	Nov
2018-P2	Howell Road - Hayhoe Riverwalk Trail Extension	Complete	Nov
2018-P3	Planning: 5 yr Parks/Recreation Plan; Bond Park Improvements	City Council approved contract award to LAP on May 6. Staff is executing contract and anticipates project kick-off this month.	
2018-P5	City Tree Evaluation	Notice to Proceed & Contract signed; Pre-Evaluation Meeting held on April 30.	
MOTOR VEHICLE POOL (MVP)			
2017-MVP6	1/2 Ton 2x4 Pickup Truck	Complete	Sep
2017-MVP7	Mower	Complete	Jul
2017-MVP8	Police Cars	Complete	Jan
2017-MVP9	Large Items (Leaf Vacuum)	Complete	Nov
2017-MVP10	5-yard Dump/Plow Truck	Complete (Build Out with Equipment Next Year)	May
2017-MVP18	Command Vehicle	Complete	Oct
2017-MVP30	Front End Material Loader	Complete	Nov
BUILDING, PROPERTY, EQUIPMENT (B)			
2017-B1	Library- Facility Evaluation	The concept design is being revised and finalized based upon public feedback. The project will be prepared to move forward to the final design and construction phases once funding has been confirmed.	
2017-B3.1	Police: Portable Radios	Complete	Oct
2017-B4	City Hall Landscaping and Lighting	Phase 1 completed. Phase 2/3 scheduled for the spring as time and budget allows.	
2017-B6	Fire: Fire Engine 809/Tower 808	Truck is on order; completion anticipated 2020	
2018-B4	IT: BS&A Timesheet Program	Not started, connection issues with offsite facilities	
2018-B4	IT: BS&A Cemetery and HR Upgrade	Complete	Nov
2018-B6	IT: AV Room Technology Patch	Requesting Council Approval May 8, 2019	
2018-B7	Planning: Cedar/127 Corridor (Transportation and Land Use)	Moved to 2019-2021 – integrate with master plan	N/A
2018-B24	City Hall Rental Space Furniture Replacement	Old rectangle tables have been replaced with plastic ones. New chairs are currently being evaluated.	

FY 2019-2020			
Project	Project Name/Description	Status	Completed
	2019 Local Streets	Bonds and Insurances in hand; Pre-Construction Meeting set for May 8, Contract and Notice of Award to be signed at the pre-construction meeting. Anticipate May 15th start of construction.	