



CITY OF BURTON
BURTON PLANNING COMMISSION MEETING
OCTOBER 12, 2021
AGENDA

Council Chambers

Regular Meeting

5:00 PM

4303 S. CENTER ROAD
BURTON, MI 48519

A. PLEDGE OF ALLEGIANCE

B. ROLL CALL

C. STAFF PRESENT

D. APPROVAL OF MINUTES

1. Planning Commission - Regular Meeting - Sep 14, 2021 5:00 PM

E. SITE PLAN REVIEW

1. SPR #21-51

By: Brivar Construction Company
7258 Kensington Rd., Brighton, MI 48116

Re: 3245 Card Dr., Burton, MI
Parcel # 59-33-501-027, Zoned M-2
Parcel # 59-33-501-020, Zoned M-2

For: Site Plan Review for addition to existing facility.

F. ADMINISTRATIVE SITE PLAN REVIEW

1. SPR #21-49

By: Deonka Bryant
6170 Eastknoll Dr., Grand Blanc, MI

Re: 3362 S. Saginaw St., Burton, MI
Parcel #59-30-576-004, Zone C-2

For: New Business, Retail Store, Flair Boutique

2. SPR #21-50

By: 4403 Davison LLC
1985 W. Big Beaver Rd., #210, Troy, MI 48084

Re: 4403 Davison Rd., Burton, MI 48509
Parcel #59-03-400-002, Zoned C-2

For: Change of Ownership

G. AUDIENCE PARTICIPATION

Now is the time set-aside for members of the audience to address the Burton Planning Commission. I would ask each individual to give their name and address for the record and to limit their comments to three (3) minutes and to speak on the topics germane to City business.

H. BOARD DISCUSSION

The next regular scheduled Planning Commission Meeting will be held on November 9, 2021 at 5:00 PM.

Agendas and minutes may be found at www.burtonmi.gov



CITY OF BURTON
BURTON PLANNING COMMISSION MEETING
SEPTEMBER 14, 2021
MINUTES

Council Chambers

Regular Meeting

5:00 PM

4303 S. CENTER ROAD
BURTON, MI 48519

This meeting was opened by Chairperson Kevin Burge at 5:00 PM.

A. PLEDGE OF ALLEGIANCE

B. ROLL CALL

Attendee Name	Title	Status	Arrived
Duane Haskins	Mayor	Excused	
Vaughn Smith	Councilman	Present	
Kevin Burge	Chairperson	Present	
Tom Gorang	Commissioner	Present	
Neil Martz	Commissioner	Present	
Don Jones	Vice Chair	Present	
Erica Edgington	Commissioner	Excused	
Kenneth Gay	Commissioner	Present	

C. STAFF PRESENT

Amber Abbey, Deputy DPW Director
 Katie Malin, Clerk's Office

D. APPROVAL OF MINUTES

1. Planning Commission - Regular Meeting - Aug 10, 2021 5:00 PM

Mr. Martz stated he did not see where it shows the vote was taken for SPR # 21-40.

Ms. Malin stated the vote shows on page 3 of your packet.

Mr. Burge concurred with the Clerk that the vote was recorded.

RESULT:	ACCEPTED [UNANIMOUS]
AYES:	Smith, Burge, Gorang, Martz, Jones, Gay
EXCUSED:	Haskins, Edgington

E. SPECIAL USE

1. BCPC# 21-41

By: Rajeshkumar Khunt
 6077 Quartz Lane Grand Blanc, MI

Minutes Acceptance: Minutes of Sep 14, 2021 5:00 PM (Approval of Minutes)

Re: 2356 N. Center Rd., Burton, MI
Parcel 59-03-504-084, Zoned C-1

For: To conduct a special use in a C-1 zone to allow a drive thru at a pharmacy.

Rajeshkumar Khunt, 6077 Quartz Lane, Grand Blanc, Michigan stated about two weeks ago I opened the pharmacy and now I would like to have a drive-through window. People like contactless service especially now with the pandemic and also during the winter months. I would like to start offering Covid-19 testing and the best way to do that is through a drive-through.

Mrs. Abbey stated I did receive a call today at 4:22 PM in the office from a resident, he is a truck driver and did not have access to email, so I did tell him I would speak on his behalf and pass along his concerns. He lives in the house at 4034 Leith Street. His biggest concerns are heavy traffic, headlights shining into his home, and what other uses would the drive-through be used for. I would like to make some stipulations to my recommendation that would hopefully fix his concerns. The city would like to make a recommendation that the need for a drive-through at a pharmacy is absolutely necessary. However, we do have a residential house directly behind it so we do want to protect their interest as well. Therefore, I would like to make a recommendation that we do a six foot high privacy fence made of wood or vinyl, only along the residential side. The other topic I would like to bring up is the other half of the building is a party store. We do not want this to be a drive-through liquor store. So, I would also like to make the stipulation that we do accept the pharmacy's need for a drive-through, but we do not accept the party stores need for a drive-through.

Mr. Martz asked about the site plan.

Mrs. Abbey stated this is a special use not a site plan.

Mr. Gorang asked, if approved tonight, when do you anticipate completion of the project?

Mr. Khunt stated he was waiting on approval to hire a contractor.

Mr. Jones asked, do you currently have a dumpster?

Mr. Khunt said yes, on the side of the building.

Mrs. Abbey stated there is no other place for the dumpster on that specific parcel of land.

Mr. Martz made a motion to approve and authorize BCPC#21-41 with the stipulations that the drive-through is for pharmacy use only and that they comply with the City of Burton screening requirements which will include the six foot high privacy fence and that a site plan is submitted.

RESULT:	CARRIED [UNANIMOUS]
MOVER:	Neil Martz, Commissioner
SECONDER:	Don Jones, Vice Chair
AYES:	Smith, Burge, Gorang, Martz, Jones, Gay
EXCUSED:	Haskins, Edgington

F. SITE PLAN REVIEW

1. SPR #21-47 Preliminary Site Plan Review

By: Kelly Walker Development LLC
2219 Abby Ct., Davison, MI 48423

Re: South West quadrant of Atherton and Vassar Rd.
Parcel 59-25-100-008, Zoned R-1B

For: The Meadows Site Condominiums

Rade Beslac, 14165 North Fenton Road, Fenton, Michigan stated we are looking at starting some subdivisions and expansions to subdivisions and these are the properties we are looking at. We want to get a preliminary site plan review approval and talk with Burton about possibly getting a water main extension brought down to the site.

Mrs. Abbey stated typically you don't see preliminary site plan reviews, what they want is to see what your thoughts are here at the Planning Commission. Going forward they would come back with a full site plan review, which would be a lot more detailed. The reason for preliminary site plan is they want to obtain the Planning Commission's buy-in before they move forward with the proposal to request that a water main be extended. The city is excited for a new subdivision and would recommend approval for the preliminary site plan review.

Mr. Martz stated it would be City Council who would approve the water main extension.

Mrs. Abbey said, yes.

Mr. Martz stated he just wanted to make sure they understood that the Planning Commission does not approve that.

Mr. Burge asked if the water main extension does not get approved, does that mean the project cannot move forward?

Mr. Belsac stated not necessarily. The project could still move forward.

Mr. Burge asked would these condos be for young families or would they be only for seniors?

Mr. Belsac stated they would not be seniors only condos. They would be for families as well.

Mr. Gorang stated it looks like it will be around 96 units.

Mr. Belsac stated I believe we are looking at 100 to 120 units.

Mr. Burge stated I understand there still is more that needs to go into this, but say everything goes as plan, when would you start?

Mr. Belsac stated about six months. The plan would be to start in the spring.

Mr. Burge asked, do you plan on building them all at once or will you build some and once those sell, build more?

Mr. Belsac stated we will do a phase one around 30 houses. We have two builders.

Mr. Burge asked if they did a study to make sure they will sell.

Mr. Belsac said yes, the builders have done a study and the area shows a need.

Mr. Smith stated he just wanted to give him a heads up, the water main extension might be hard to get approval. I do think this is a great thing though.

Mr. Burge asked if we should vote separately on each preliminary site plan?

Mrs. Abbey said yes, that way you can look at each one and it gives you the opportunity to let them know if there is anything you would like to see.

Mr. Burge stated I would like to see an island with nice landscaping and a lit sign.

Mrs. Abbey stated in theory the islands look nice, until they do not exist anymore. We have had more problems with those. I would suggest that on the private property instead of the public right of way.

Mr. Gorang asked if there is any plans of a community room.

Mr. Beslac stated not on these projects.

Mr. Burge asked, would the homeowner be responsible for paying the taxes and utility bills?

Mr. Belsac said, yes, it would be the homeowners responsibility.

Mr. Burge asked, with it being a condo will there be rules to follow?

Mr. Beslac said yes, there will be rules and restrictions.

Mr. Burge asked, do they still following zoning rules?

Mrs. Abbey said, yes.

Mr. Jones asked, how big will the homes be?

Mr. Belsac stated we are looking at about 1500-1800 square feet.

RESULT:	CARRIED [UNANIMOUS]
MOVER:	Kenneth Gay, Commissioner
SECONDER:	Tom Gorang, Commissioner
AYES:	Smith, Burge, Gorang, Martz, Jones, Gay
EXCUSED:	Haskins, Edgington

2. SPR #21-48 Preliminary Site Plan Review

By: Kelly Walker Development LLC
2219 Abby Ct., Davison, MI 48423

Re: South West Quadrant of Atherton and Vassar Rd.
Parcel 59-25-200-010, Zoned R-1B

For: The Fields Site Condominiums

Rade Beslac, 14165 North Fenton Road, Fenton, Michigan stated we have 115 lots in front of you and these are a little bigger lots than the previous plan.

Mr. Burge asked everything you talked about on the previous plan is the same as this?

Mr. Belsac said yes, this piggybacks the previous plan.

RESULT:	CARRIED [UNANIMOUS]
MOVER:	Don Jones, Vice Chair
SECONDER:	Kenneth Gay, Commissioner
AYES:	Smith, Burge, Gorang, Martz, Jones, Gay
EXCUSED:	Haskins, Edgington

G. ADMINISTRATIVE SITE PLAN REVIEW

1. SPR #21-42

By: Lazar Assoofi
3459 N. Gale Rd., Davison, MI 48423

Re: 4232 S. Dort Hwy. Suite 1, Burton, MI 4829
Parcel 59-32-200-020, Zone M-1

For: New Business, Patriot Auto Mall

2. SPR #21-43

By: RCB Enterprises Co., LLC
5042 Exchange Dr., Flint, MI 48507

Re: 4211 Fenton Rd., Burton, MI 48507-2448
Parcel 59-31-501-086, Zone C-2

For: New Business, RCB Enterprises Co., LLC

3. SPR #21-45

By: Shane & Tracy Moore
719 W. Flint St., Davison, MI 48423

Re: 1235 S. Center Rd., Burton, MI
Parcel 59-15-100-015, Zone C-4

For: New Business, Spymaker Axe Throwing, LLC

Mr. Gorang asked about the axe throwing.

Mrs. Abbey stated there will be an escape room as well as six lanes of axe throwing.

4. SPR #21-46

By: Wael Alaameri & Wael Alshabl
2420 N. Bond St., Saginaw, MI

Re: 4121 Fenton Rd., Burton, MI
Parcel 59-31-100-017, Zone C-2

For: Change of Ownership, no business, storage only

Mr. Martz asked how a site plan can be approved with no use.

Mrs. Abbey stated every time there is a change of ownership doesn't mean the person that purchased the building knows exactly what they plan to do with it. The intent is to get the inspection, get repairs done and to get the building looking better than it would otherwise. They are required as a part of that initial inspection to decide the use before occupancy is given.

H. AUDIENCE PARTICIPATION

None.

I. BOARD DISCUSSION

Mr. Martz stated he has drove by the new food truck establishment on Davison Road and noticed lots of cars parked in the grass and tents set up to wash dishes. I am not sure how that is in compliance with anything we talked about.

Mrs. Abbey stated this is the first I am hearing of this. There has been no complaints made to our office.

Mr. Burge stated he did see cars parked in the grass too.

Mrs. Abbey said she will take care of it and send out the code enforcer.

Mr. Smith stated I hope he is successful. Has there been many complaints made?

Mrs. Abbey said no. On the first day he was open, we received complaints about cars parked up and down the street. He came in the office right away and was very apologetic. Since then, we have not received one complaint, so I assumed the problem was taken care of. It was made clear, there is to be no parking on the grass.

Mr. Smith stated I do not want to discourage him, but people are still parking on the grass.

Mrs. Abbey stated he still has rules and that was the point of coming before the Planning Commission. We want you to be successful, but you have to respect the ordinances of the City of Burton. I, myself will go out there tomorrow and speak with him, but I am a little concerned that no one has mentioned any of these things until today.

Mr. Burge stated on a positive note, I have drove by and saw someone out there picking up trash.

Mrs. Abbey stated he did assure me that he had someone hired for that purpose.

Mr. Burge stated the training for tonight will be cancelled due to the construction.

Mrs. Abbey stated I would like to schedule the training tentatively for after the next meeting on October 12, 2021.

The next regular scheduled Planning Meeting will be held on October 12, 2021 @ 5:00 PM.

Agendas and minutes may be found at www.burtonmi.gov

Meeting was adjourned at 6:18 PM.

Minutes Acceptance: Minutes of Sep 14, 2021 5:00 PM (Approval of Minutes)



Burton Planning Commission

4303 S. Center Road
Burton, MI 48519

SCHEDULED

AGENDA ITEM (ID # 5207)

Meeting: 10/12/21 05:00 PM
Department: Department of Public Works
Category: Site Plan Review
Prepared By: Leandra Swayne
Department Head: Charles Abbey

E.1

DOC ID: 5207

SPR #21-51

By: Brivar Construction Company
7258 Kensington Rd., Brighton, MI 48116

Re: 3245 Card Dr., Burton, MI
Parcel # 59-33-501-027, Zoned M-2
Parcel # 59-33-501-020, Zoned M-2

For: Site Plan Review for addition to existing facility.

ATTACHMENTS:

- Back up fpr Agenda SPR 21-51 (PDF)
- T-REX Site Plan Archs 20210721 (PDF)
- T-REX-CIVIL SET Layout-20210915 (PDF)



City of Burton
 Department of Public Works
 4093 Manor Drive
 Genesee County, Burton, Michigan 48519
 (810) 742-9230



APPLICATION FOR SITE PLAN REVIEW

DATE FILED: 9-28-21
 FEE: 200 and

SPR #: 21-51

DATE OF PLANNING COMMISSION MEETING: OCTOBER 12 2021 TIME: 5

PLEASE PRINT

APPLICANTS NAME: Brivar Construction Company

APPLICANTS ADDRESS: 7258 Kensington Road

Brighton, MI 48116

APPLICANTS PHONE NO: 248-446-8000

APPLICANTS EMAIL: craig@brivar.com

PROPOSED NAME OF BUSINESS: T-REX

SITE ADDRESS: 3245 Card Drive

SUBDIVISION & LOT # OR PARCEL NUMBER: 59-33-501-027 & 59-33-501-020 - To be combined

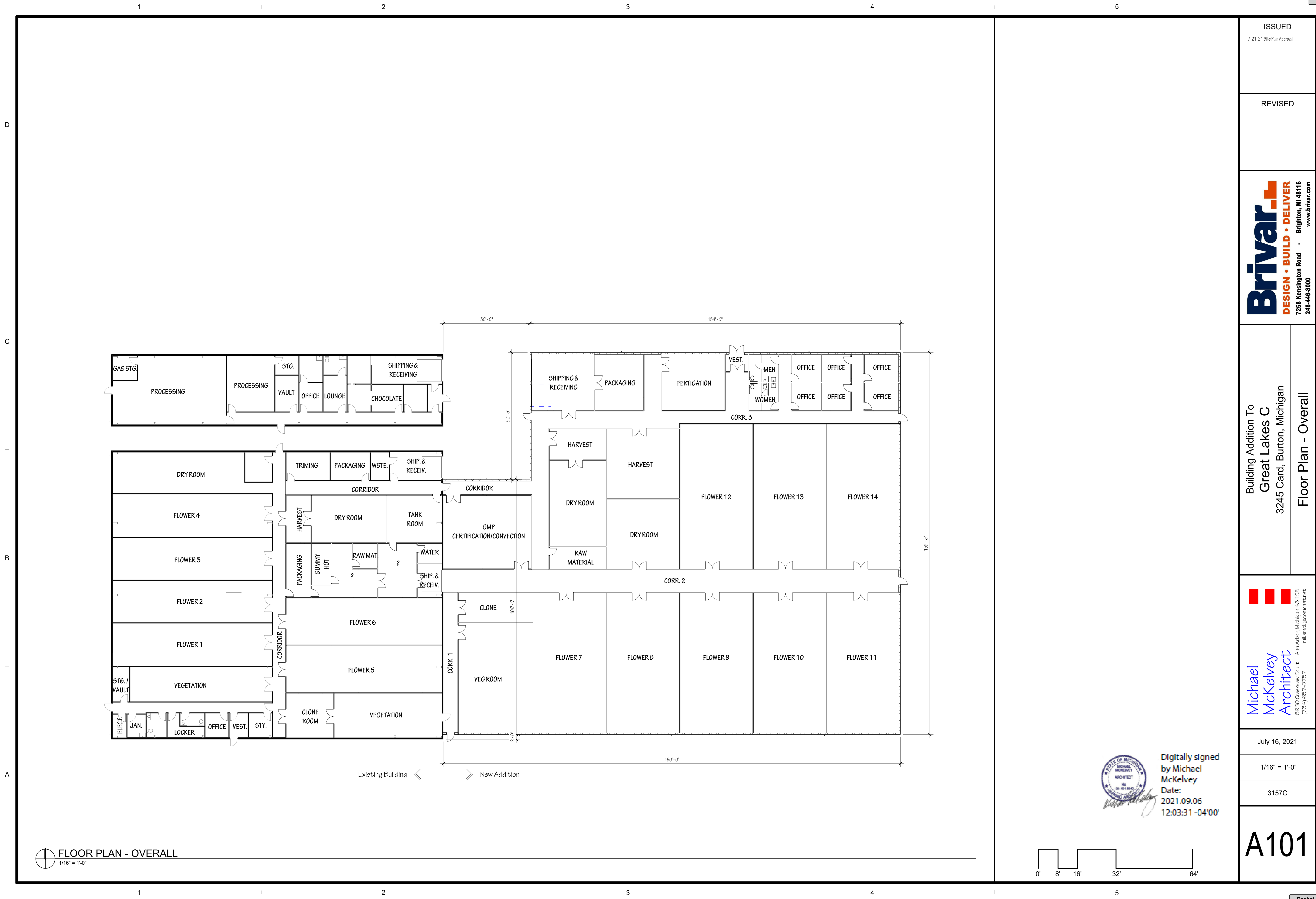
RE: Site plan review for addition to existing facility

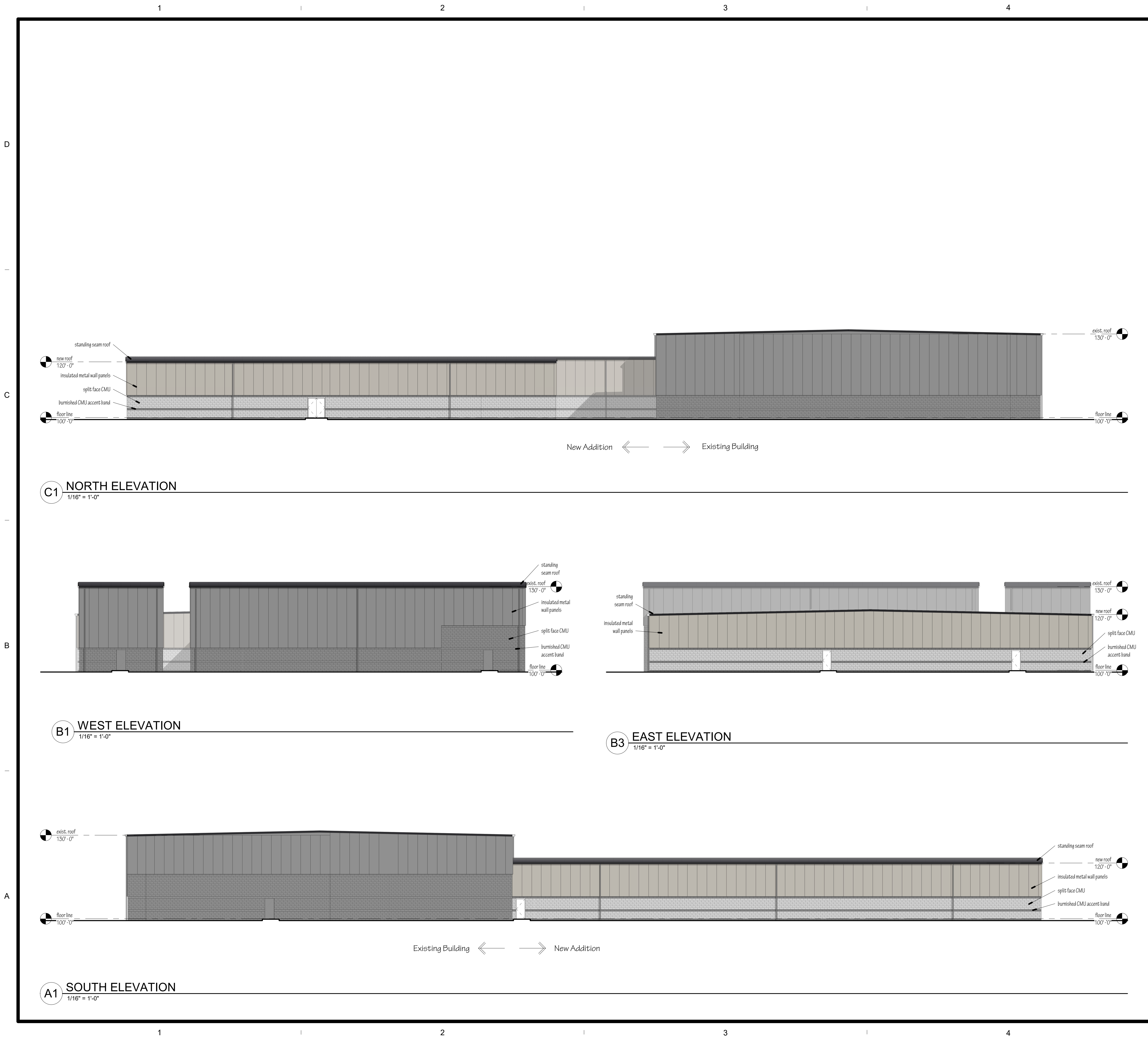
I hereby certify that the proposed application is authorized by the owner of record and that I have been authorized by the owner to make this application as his agent. I agree the statements made on the attached application are true, and if found not to be true, any permit that may be issued may be void. Further, I agree to give permission to officials of the City of Burton to enter the property subject to this permit application for the purposes of inspections. Further I understand that this is an application and any fees paid will not be refundable regardless of the decision of the Commission. It is to your advantage to attend the above scheduled meeting. The Planning Commission may have questions that directly affect approval, denial, or postponing until these questions can be answered.

APPLICANTS SIGNATURE: _____

NOTE: All site plans must be filed at least two (2) weeks prior to the Planning Commission hearing and **MUST** comply with the procedures set forth in Section 157.092 of Codified Ordinance as attached. Must include **twelve (12) sets** of prints and **one (1) electronic** in order to process the application.

Attachment: Back up for Agenda SPR 21-51 (5207 : SPR #21-51)





ISSUED
7-21-21 Site Plan Approval

REVISED

Brivar
DESIGN • BUILD • DELIVER
7258 Kensington Road • Brighton, MI 48116
248-446-8000
www.brivar.com

Building Addition To
Great Lakes C
3245 Card, Burton, Michigan
Elevations

Michael McKelvey Architect
5900 Creekside Court
Ann Arbor, Michigan 48106
(734) 657-0757
mmckel@comcast.net

July 16, 2021

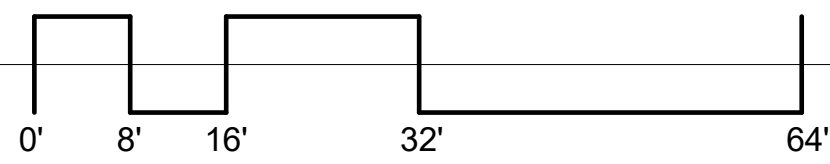
1/16" = 1'-0"

3157C

A201



Digitally signed
by Michael
McKelvey
Date:
2021.09.06
12:03:31 -04'00'





AGENCY CONTACT INFORMATION

CITY OF BURTON
PLANNING & ZONING
4093 MANOR DR
BURTON, MI 48519
PH: 810-742-9230

SANITARY & WATER
GCDC-WWS
LYNNETTE MEINZ
G-4610 BEECHER RD
FLINT, MI 48532
PH: 810-732-7870

STORM
GCDC-SWM
TOM JONES
G-4608 BEECHER RD
FLINT, MI 48532
PH: 810-732-1590

INDUSTRIAL DISCHARGE PERMIT
GCDC-IIP
LISA MILTON
G-4610 BEECHER RD
FLINT, MI 48532
PH: 810-232-7662

GAS SERVICE
CONSUMER'S ENERGY
GABRIEL POLETTI
3201 E COURT ST
PO BOX 408
FLINT, MI 48501
PH: 810-760-3486

ELECTRIC SERVICE
CONSUMER'S ENERGY
GABRIEL POLETTI
3201 E COURT ST
PO BOX 408
FLINT, MI 48501
PH: 810-760-3506

TELEPHONE
AT&T
JEFF HEATH
502 BEECH ST
ROOM 402
FLINT, MI 48502
PH: 810-768-0267

LEGAL DESCRIPTION (AS PROVIDED)

(PER TAX DESCRIPTION BY: GENESEE COUNTY GIS MAP)

PARCEL TAX NUMBER: 59-33-501-027

LOT 23 BRISTOL ROAD INDUSTRIAL PARK.

BEARING REFERENCE

BEARINGS ARE BASED ON PROJECT COORDINATE SYSTEM:
MICHIGAN STATE PLANE COORDINATE SYSTEM, NAD83 (CONUS) (MOL) (GRS80), SOUTH ZONE 2113,
INTERNATIONAL FEET, GROUND (LAT: 42°5'11.9" N, LON: 83°38'38.5" W, ELEV: 813,
SCALE FACTOR: 1.0000391219).

NOTES:

- THIS PROJECT HAS BEEN DESIGNED IMPLEMENTING THE LATEST GCDC-WWS DESIGN SPECIFICATIONS.
CAREFULLY REVIEW THE NOTES, DETAILS, AND DESIGN PRIOR TO SUBMITTING A BID.
FULL COMPLIANCE WITH THE NEW STANDARDS WILL BE REQUIRED.
- THE TOTAL DISTURBED AREA IS 1.34 ACRES AND AN NPDES PERMIT IS NOT REQUIRED.
- UTILITIES SHOWN HEREIN ARE THE RESULTS OF A GROUND SURVEY BASED VISUAL OBSERVATIONS AND MISS DIG UTILITY LOCATE MARKERS IN THE FIELD. UTILITIES WERE NOT EXPOSED TO DETERMINE LOCATION.

DESIGN ENGINEER/SURVEYOR

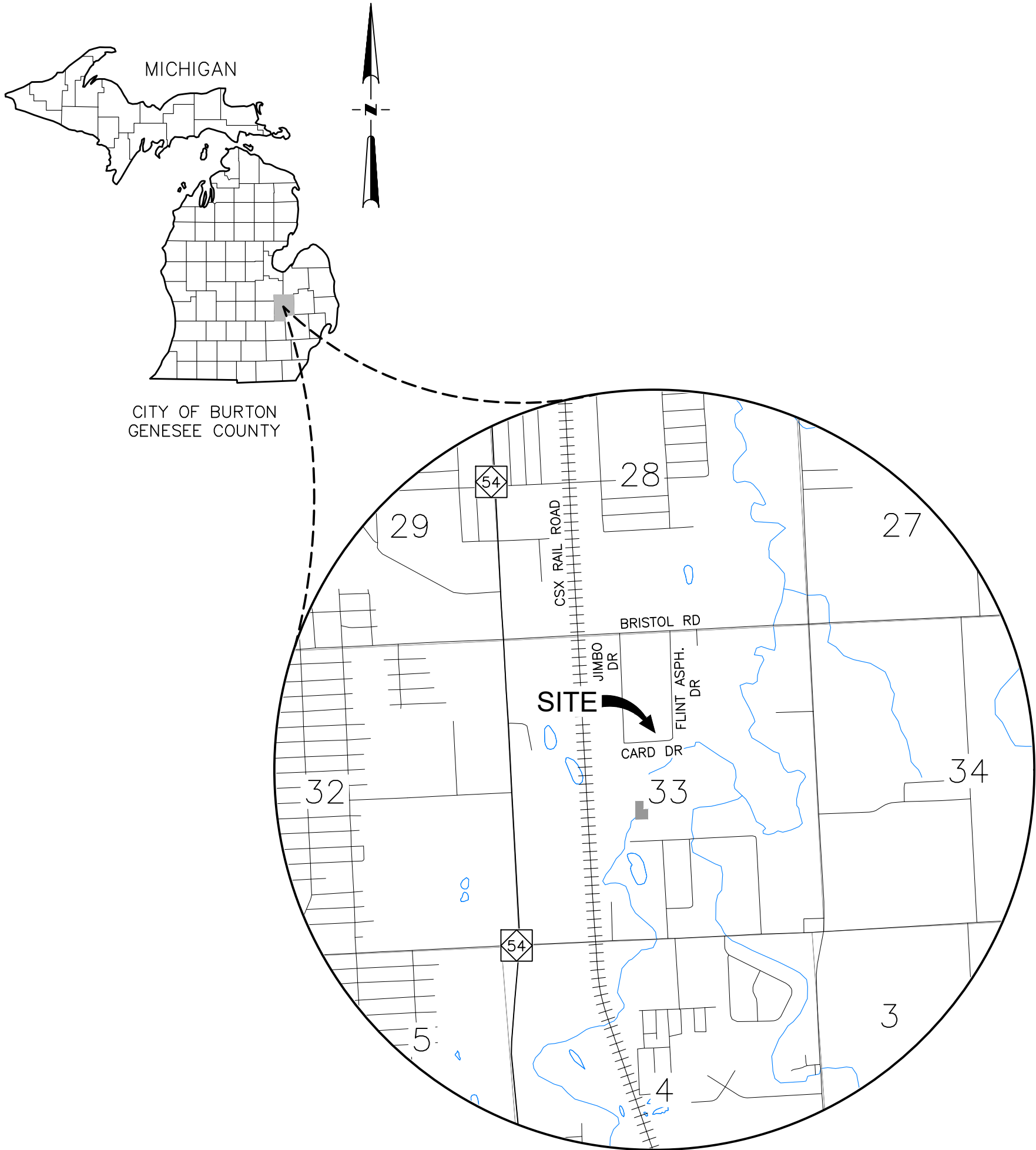
Monument Engineering Group Associates, Inc.
MEGA
INC.

INNOVATIVE GEOSPATIAL &
ENGINEERING SOLUTIONS

298 VETERANS DRIVE,
FOWLERVILLE, MI 48836
ALLAN W PRUSS, PE, PS
PHONE: 517-223-3512

MONUMENT ENGINEERING GROUP ASSOCIATES, INC

SITE PLAN DRAWINGS FOR
T-REX



LOCATION MAP

CLIENT

Brivar.
DESIGN • BUILD • DELIVER

BRIVAR CONST. CO.
7258 KENSINGTON ROAD
BRIGHTON, MI 48116
(248) 446-8000

ARCHITECT

MICHAEL MCKELVY
ARCHITECT

5900 CREEKVIEW COURT,
ANN ARBOR, MI 48108
PHONE: 734-657-0757

SHEET INDEX

		PLAN SUBMITTALS					
		90% PLAN SUBMITTAL	SITE PLAN SUBMITTAL	SITE PLAN			
		7/28/2021	8/06/2021	9/15/2021			
		INCLUDED SHEETS					
GENERAL							
SHEET	G-1.0 COVER	•	•	•			
SURVEY							
SHEET	V-1.0 TOPOGRAPHIC SURVEY	•	•	•			
CIVIL DEMOLITION							
SHEET	CD-1.0 DEMOLITION PLAN	•	•	•			
SITE PLAN							
SHEET	C-1.0 DIMENSION AND PAVING PLAN	•	•	•			
VEHICLE CIRCULATION							
SHEET	C-2.0 EMERGENCY VEHICLE CIRCULATION	•	•	•			
SHEET	C-2.1 REFUSE VEHICLE CIRCULATION	•	•	•			
SHEET	C-2.2 SU-40 DELIVERY TRUCK CIRCULATION	•	•	•			
UTILITY							
SHEET	C-3.0 UTILITY PLAN	•	•	•			
SHEET	C-3.1 UTILITY PROFILES		•	•			
GRADING AND SOIL EROSION & SEDIMENTATION CONTROL							
SHEET	C-7.0 GRADING AND SESC PLAN	•	•	•			
STORM WATER MANAGEMENT							
SHEET	C-9.0 DRAINAGE AREA PLAN	•	•	•			
SHEET	C-9.1 STORM WATER CALCULATIONS	•	•	•			
DETAILS							
SHEET	C-11.0 DETAILS	•	•	•			
SPECIFICATIONS							
SHEET	C-12.0 SPECIFICATIONS	•	•	•			
SHEET	C-12.1 SPECIFICATIONS	•	•	•			
LANDSCAPE							
SHEET	X LANDSCAPE PLAN						
SHEET	X LANDSCAPE DETAILS						
CITY OF BURTON, GENESEE COUNTY STANDARD DETAILS, GCDC WWS DETAIL SHEETS							

INNOVATIVE GEOSPATIAL
& ENGINEERING SOLUTIONS

Monument Engineering Group Associates, Inc.
MEGA
INC.

298 VETERANS DRIVE
FOWLERVILLE,
MICHIGAN 48836
(OFFICE) 517-223-3512
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED
SMALL BUSINESS (SDVOSB)



Call MISS DIG
3 full working days before you dig:

Michigan's
One-Call
Utility
Notification
Organization

1-800-482-7171
www.missdig.org

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

CLIENT :

Brivar.
DESIGN • BUILD • DELIVER

BRIVAR CONST. CO.
7258 KENSINGTON ROAD
BRIGHTON, MI 48116
(248) 446-8000

COVER

T-REX
3285 CARD DRIVE,
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
90% PLAN SUBMITTAL	7/28/2021
SITE PLAN SUBMITTAL	8/06/2021
SITE PLAN	9/15/2021

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: N/A
0 1/2" 1"

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

G-10

Attachment: T-REX-CIVIL SET Layout-20210915 (6207 - SPR #21-51)

NOT FOR CONSTRUCTION

STRUCTURE SCHEDULE

EX. STORM SEWER			EX. SANITARY SEWER		
STRUCTURE	RIM ELEV.	PIPES	STRUCTURE	RIM ELEV.	PIPES
(10128) CBS	792.10	12" S IE= 787.13 12" N IE= 787.11	(10295) SAN	794.93	8" W IE= 790.19 8" N IE= 790.06 8" S IE= 790.14
(10296) CBS	792.16	12" N IE= 787.81	(10305) SAN	796.39	8" W IE= 790.09
(10303) STMH	794.78	12" S IE= 787.81 30" N IE= 783.41 30" E IE= 782.91	(15014) SAN	795.09	6" NE IE= 789.67 30" N IE= 787.92 8" W IE= 787.92 8" E IE= 787.92
(10304) CBS	790.96	30" W IE= 781.74 36" SE IE= 781.64	(35203) SAN	796.39	6" N IE= 791.70 6" S IE= 791.70
(21030) CBS	793.64	6" W IE= 791.38 6" SW IE= 791.38			
(21031) CBR	793.95	6" E IE= 791.98			
(35175) STMH	794.02	30" W IE= 782.60 30" E IE= 782.48 12" N IE= 790.85			
(37045) CBR	794.46	12" S IE= 791.70 6" N IE= 792.83			
(37071) CBR	795.86	6" S IE= 795.07			
(37101) STMH	793.93	6" NE IE= 790.03 30" W IE= 782.40 30" E IE= 782.26 12" S IE= 786.77			
(40000) CBR	795.31	6" W IE= 793.76 6" W IE= 793.13 12" N IE= 793.01			
(40004) CBR	795.24	NOT INVENTORIED AT TIME OF SURVEY			
(40009) CBR	795.59	12" S IE= 792.58 12" W IE= 792.62 6" N IE= 791.87			
(200021) OCS	793.87	12" S IE= 792.63			

FLOOD ZONE

FEMA MAP SCALES DO NOT SUPPLY SUFFICIENT LEVEL OF DETAIL TO PLOT ACCURATELY. ZONES IF PLOTTED HEREIN ARE APPROXIMATE.

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE ENTIRELY IN ZONE (X) AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE COUNTY OF GENESEE, COMMUNITY PANEL NO. (26049C0307D), EFFECTIVE DATE SEPTEMBER 25, 2009.

WETLAND NOTE

ACCORDING TO THE NATIONAL WETLAND INVENTORY WEBSITE (HTTP:WWW.FWS.GOV/WETLANDSDATAMAPPER.HTML), THERE ARE NO NOTED WETLANDS ON THE SUBJECT PARCEL. WETLAND FLAGGING WAS NOT OBSERVED DURING THE FIELD SURVEY. AN OFFICIAL STUDY FOR THE PRESENCE OF WETLANDS WAS NOT CONDUCTED BY MONUMENT ENGINEERING GROUP ASSOCIATES.

SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (HTTPS://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

- Cvr2aB: CONOVER LOAM, 0-4% SLOPES
- NOTE: THIS SOILS TYPE ENCOMPASSES THE ENTIRE SITE

BENCHMARKS

DATUM: NAVD88

BM A:
RAIL ROAD SPIKE ON NORTH SIDE UTILITY POLE, 27'± SOUTH OF CENTERLINE CARD DRIVE & 85'± WEST OF SUBJECT'S SOUTHWEST PROPERTY CORNER.
ELEV = 795.76

BM B:
RAIL ROAD SPIKE ON NORTH SIDE UTILITY POLE LOCATED AT SUBJECT'S SOUTHEAST PROPERTY CORNER.
ELEV = 794.98

BM C:
60D NAIL IN 25" BLACK OAK, 35'± SOUTH OF CENTERLINE CARD DRIVE & 153'± EAST OF SUBJECT'S ACCESS DRIVE TO SITE.
ELEV = 797.58

EXISTING PARKING

- 23 REGULAR SPACES
1 BARRIER FREE SPACES
24 TOTAL PARKING SPACES

EXISTING LEGEND

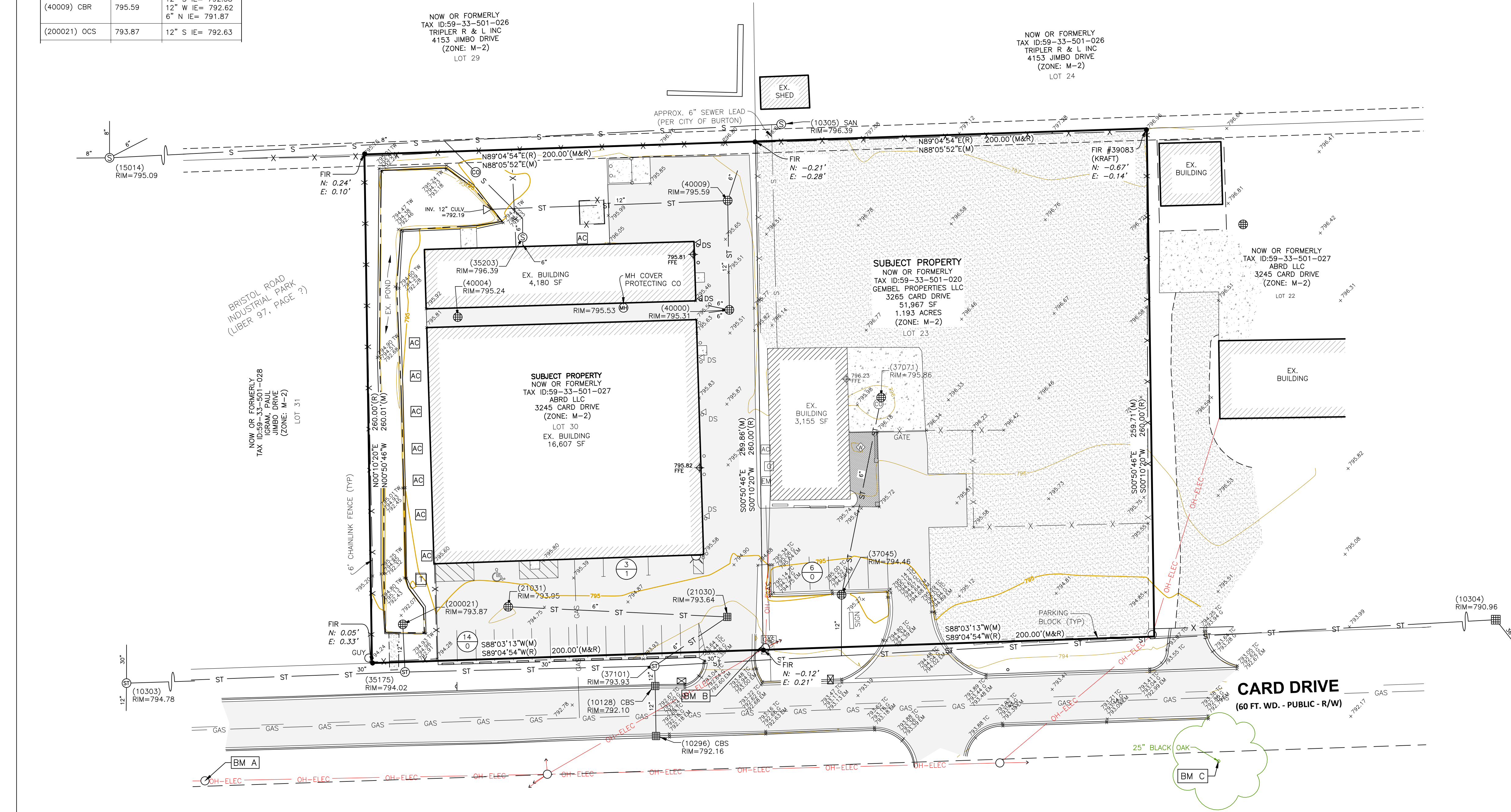
DECIDUOUS TREE, CONIFEROUS TREE, SHRUB
TREE LINE/ CANOPY
DITCH/ DRAINING COURSE
UG TELE, MH, TELE PED, CABLE PED
UG FIBER, PED, LINE MARKER, VAULT
UG ELEC, MH, TRANSFORMER, AC UNIT, METER, BOX
OH ELEC, UTIL POLE, GUY WIRE
GROUND LIGHT, POLE, POLE W/ ARM LT
LIGHT MH, LT CTRL BOX, PARK. METER, CAR CHARGER
ELEC HAND HOLE, OUTLET, SIGNAL MH, SIGNAL BOX
UG GAS, MH, VALVE, LINE MARKER
GAS WELL, METER, VENT
WATER MAIN, MH, VALVE IN BOX, HYDRANT, FDC
WATER WELL, METER, STOP BOX, POST INDICATOR VALVE
IRRIGATION CONTROL VALVE, SPRINKLER HEAD
STORM SEWER, MH, CB, INLET, YARD DRAIN, DOWN SPOUT
CULVERT/ END SECTION
SANITARY SEWER, MH, CLEAN OUT
COMBINED SEWER, MH
STEAM LINE, MH
MISC. MANHOLE, HAND HOLE, HAND BOX
PARKING BLOCK, SIGN, FLAG POLE, POST, ROCK, MAIL BOX
SECTION LINE, SECTION CORNER
FOUND IRON ROD (FIR), FD MON, FD PK
SET IRON ROD (SIR), SET PK, MAG NAIL
FINISH FLOOR ELEVATION, SPOT ELEVATION
CONTOUR
FENCE
GUARD RAIL
RAILROAD SIGNAL, SIGNAL BOX
SOIL BORING
EX. ASPHALT
EX. CONCRETE
EX. GRAVEL

GCDC-WWS STANDARD NOTES

- PRIOR TO BEGINNING ANY OF THIS WORK THE CONTRACTOR SHALL NOTIFY GCDC-WWS AT (810) 732-7870 AND FILL OUT THE NECESSARY FORMS OR PERMITS. THE CONTRACTOR SHALL CUT AND SEAL THE EXISTING SANITARY LEAD AT THE PROPERTY LINE AND SHALL DISCONNECT THE EXISTING WATER SERVICE LEAD AT THE CURB BOX SHUT-OFF VALVE ON THE HOUSE SIDE OF THE VALVE.
- ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES. ALL DEMOLITION OPERATIONS SHALL COMPLY WITH MICHIGAN REGULATIONS INSOFAR AS THEY APPLY TO THE REQUIRED WORK. A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT WILL BE REQUIRED PRIOR TO DEMOLITION.
- THE CONTRACTOR SHALL REMOVE AND CLEAR ALL TREES, BRUSH, FENCES, BUILDINGS, CURB, AND ASPHALT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ALL DEMOLITION MATERIAL SHALL BE PROPERLY REMOVED FROM THE SITE AND DISPOSED OF IN A LEGALLY DESIGNATED DISPOSAL AREA. NO ON-SITE BURNING WILL BE ALLOWED WITHOUT PROPER PERMISSION. PERMITS AND FEES FOR DISPOSAL OF DEMOLITION MATERIAL SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE ANY ITEMS REMAINING FROM THE EXISTING BUILDING, IN ITS ENTIRETY, INCLUDING WALLS, FOUNDATIONS AND FOOTINGS. ALL BUILDING DRAINS AND UTILITY LEADS SHALL BE LOCATED AND PROPERLY PLUGGED. UTILITY LEAD WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- BACKFILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR.
- AT THE CONCLUSION OF THE DEMOLITION OPERATIONS, THE ENTIRE WORK AREA SHALL BE LEFT IN A CLEAN CONDITION. ALL PROTECTIVE DEVICES AND BARRIERS SHALL BE REMOVED.

UTILITY NOTES

- ALL FRANCHISE UTILITIES (GAS, FIBER, CABLE, UG ELEC., TELE.) SHOWN ARE BASED ON MISS DIG MARKINGS LOCATED AT TIME OF SURVEY UNLESS NOTED OTHERWISE.
- THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



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CLIENT :

Brivar

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BRIVAR CONST. CO.
7258 KENSINGTON ROAD
BRIGHTON, MI 48116
(248) 446-8000

TOPOGRAPHIC SURVEY

T-REX

3285 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

DATE	7/28/2021
DATE	8/06/2021
DATE	9/13/2021

PLAN SUBMITTALS/REVISIONS	
90% PLAN SUBMITTAL	
SITE PLAN SUBMITTAL	
SITE PLAN	

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'

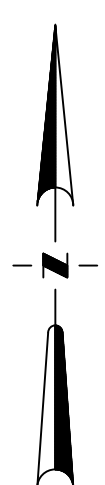
0 1/2" 1"

FIELD:
DRAWN BY: CW, GB
DESIGN BY: DC, MN
CHECK BY: AP

V-10

NOT FOR CONSTRUCTION

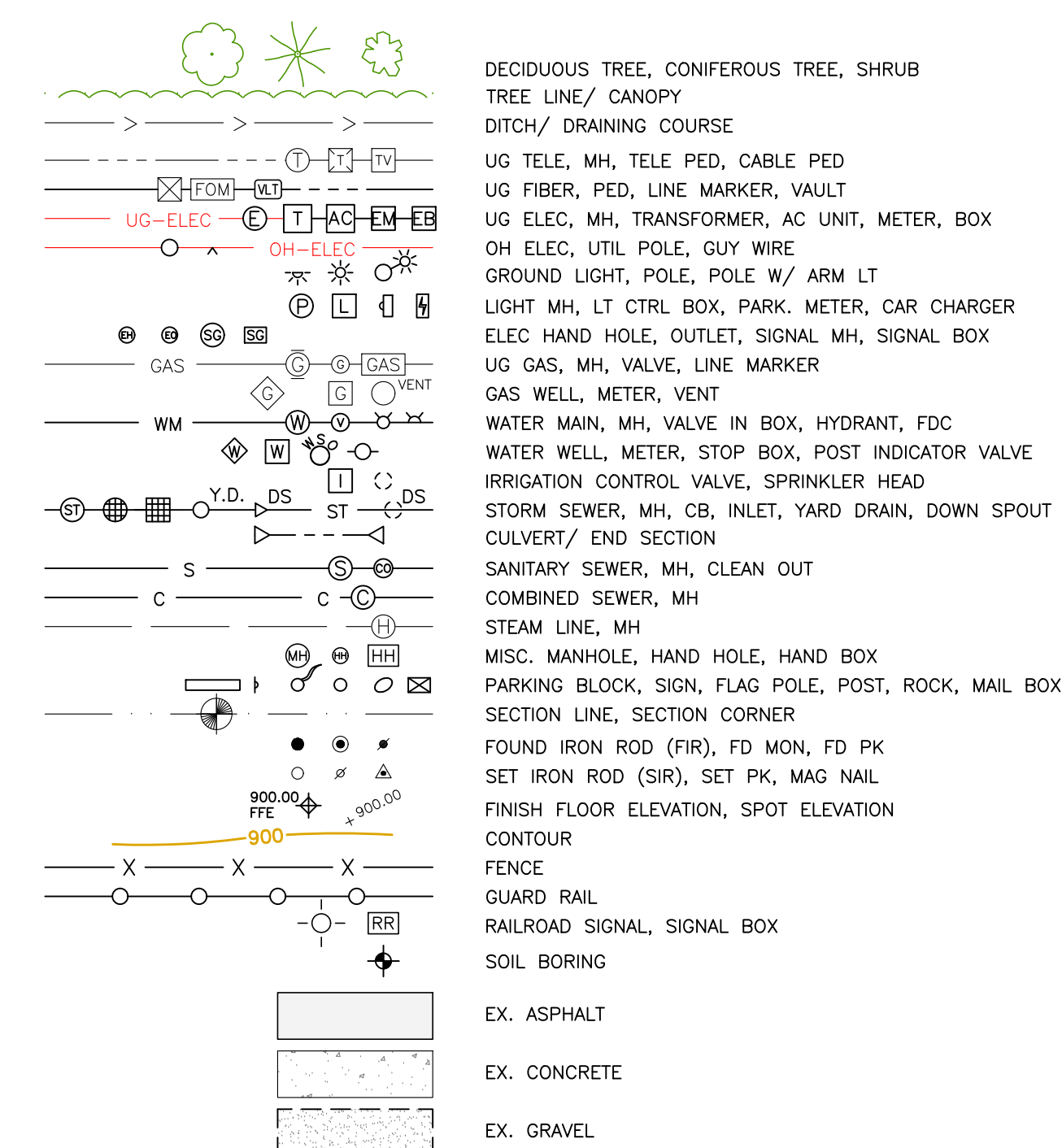
Attachment: T-REX-CIVIL SET Layout:20210915 (2307 - SPR #21-51)



DEMOLITION NOTES

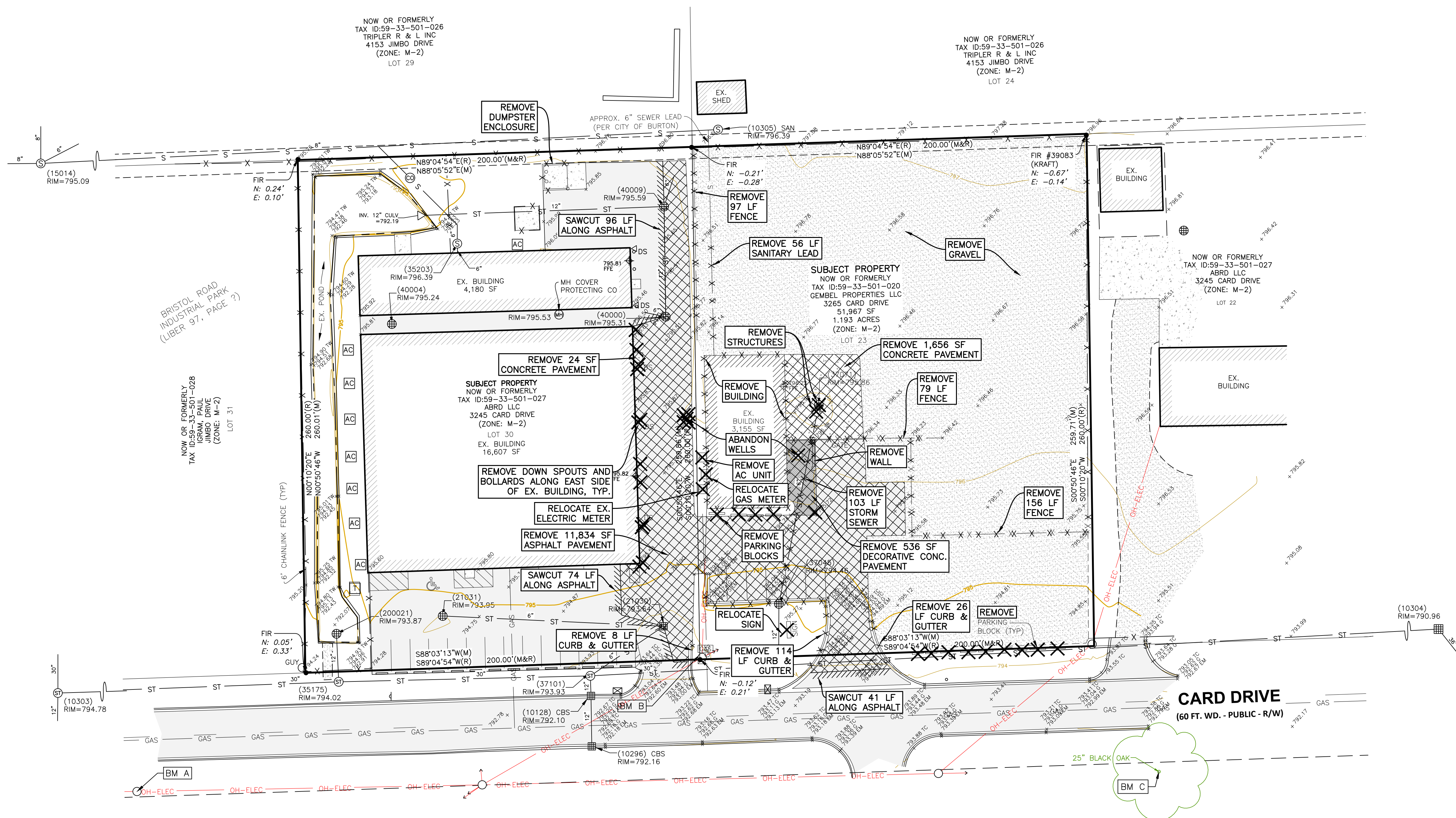
1. UTILITY OBJECTS SUCH AS GAS METER, TRANSFORMER, TELEPHONE PEDESTAL, UTILITY POLE & WIRES ARE TO BE REMOVED BY OTHERS IF APPLICABLE.
2. ANY TREES NOT MARKED PER PLAN ARE TO BE PROTECTED & PRESERVED DURING CONSTRUCTION.

EXISTING LEGEND



GCDC-WWS DEMOLITION NOTES

1. Prior to beginning any of this work, the contractor shall notify GDCD-WWS at (810) 732-7870 and fill out the necessary forms or permits. The contractor shall cut and seal the existing sanitary lead at the property line and shall disconnect the existing water service lead at the curb box shut-off valve on the house side of the valve.
2. All demolition work shall conform to all local codes and ordinances. All demolition operations shall comply with MIOSHA regulations insofar as they apply to the required work. A Soil Erosion and Sedimentation Control Permit will be required prior to demolition.
3. The contractor shall remove and clear all trees, brush, fences, buildings, curb, and asphalt as shown on the plans or as directed by the Engineer.
4. All demolition material shall be properly removed from the site and disposed of in a legally designated disposal area. No on-site burning will be allowed without proper permission. Permits and fees for disposal of demolition material shall be obtained and paid for by the contractor.
5. The contractor shall demolish and remove any items remaining from the existing building, in its entirety, including walls, foundations and footings. All building drains and utility leads shall be located and properly plugged. Utility lead work shall be coordinated with the appropriate utility company.
6. Backfill excavated areas with clean granular fill compacted to 95% of the material unit weight by modified proctor.
7. At the conclusion of the demolition operations, the entire work area shall be left in a clean condition. All protective devices and barriers shall be removed.



DEMOLITION PLAN

T-REX
3265 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
90% PLAN SUBMITTAL	7/28/2021
SITE PLAN SUBMITTAL	8/06/2021
SITE PLAN	9/15/2021

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'

FIELD: CW, GB
DRAWN BY: DC, MN

DESIGN BY: BS, TB
CHECK BY: AP

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CD-1.0

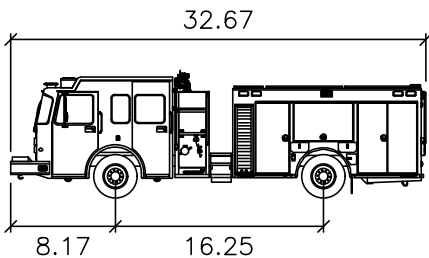
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Back

NOT FOR CONSTRUCTION



EMERGENCY VEHICLE



TOYNE PUMPER

	FEET
WIDTH	: 8.35
TRACK	: 7.93
LOCK TO LOCK TIME	: 6.0
STEERING ANGLE	: 50.0

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BRIGHTON, MI 48116
(248) 446-8000

EMERGENCY VEHICLE CIRCULATION

T-REX
3265 CARD DRIVE,
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
90% PLAN SUBMITTAL	7/28/2021
SITE PLAN SUBMITTAL	8/05/2021
SITE PLAN	9/15/2021

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'

0 1/2" 1"

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

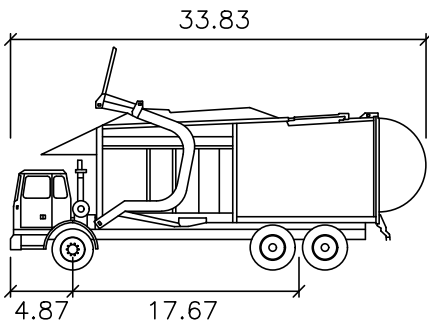
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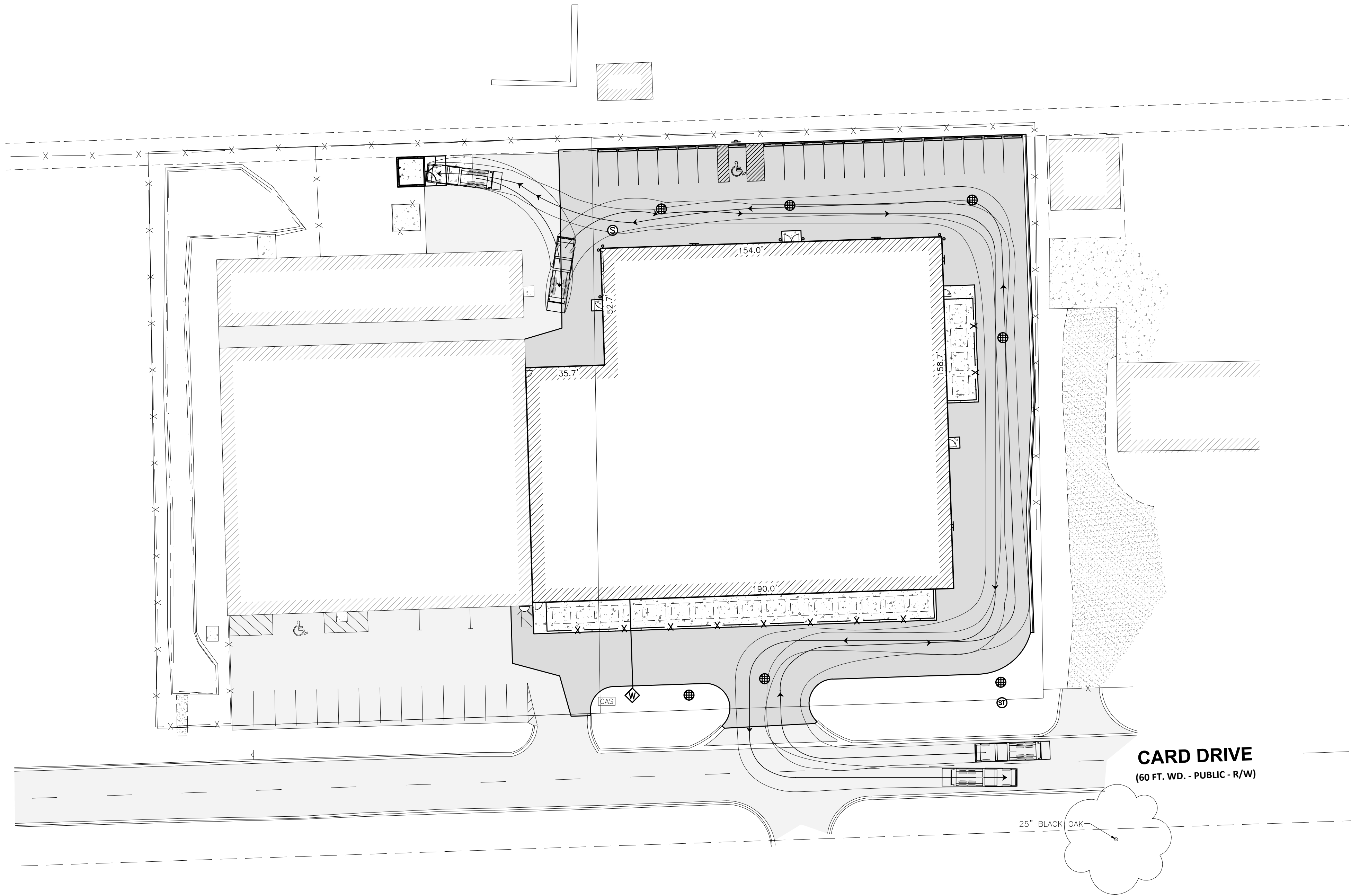


REFUSE VEHICLE



Wayne Titan

WIDTH	: 8.46
TRACK	: 8.00
LOCK TO LOCK TIME	: 6.0
STEERING ANGLE	: 45.0



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REFUSE VEHICLE CIRCULATION

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3265 CARD DRIVE,
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CITY OF BURTON, GENESEE COUNTY, MICHIGAN

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SITE PLAN SUBMITTAL	8/02/2021
SITE PLAN	9/13/2021

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7/28/2021

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FIELD: CW, GB
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CHECK BY: AP

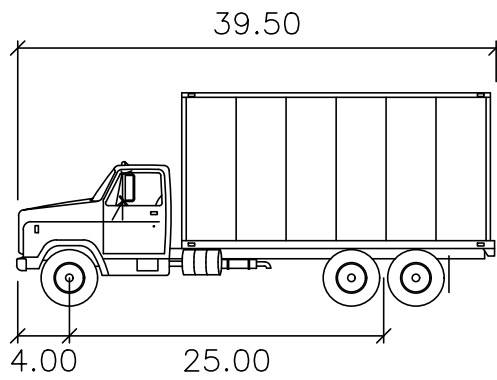
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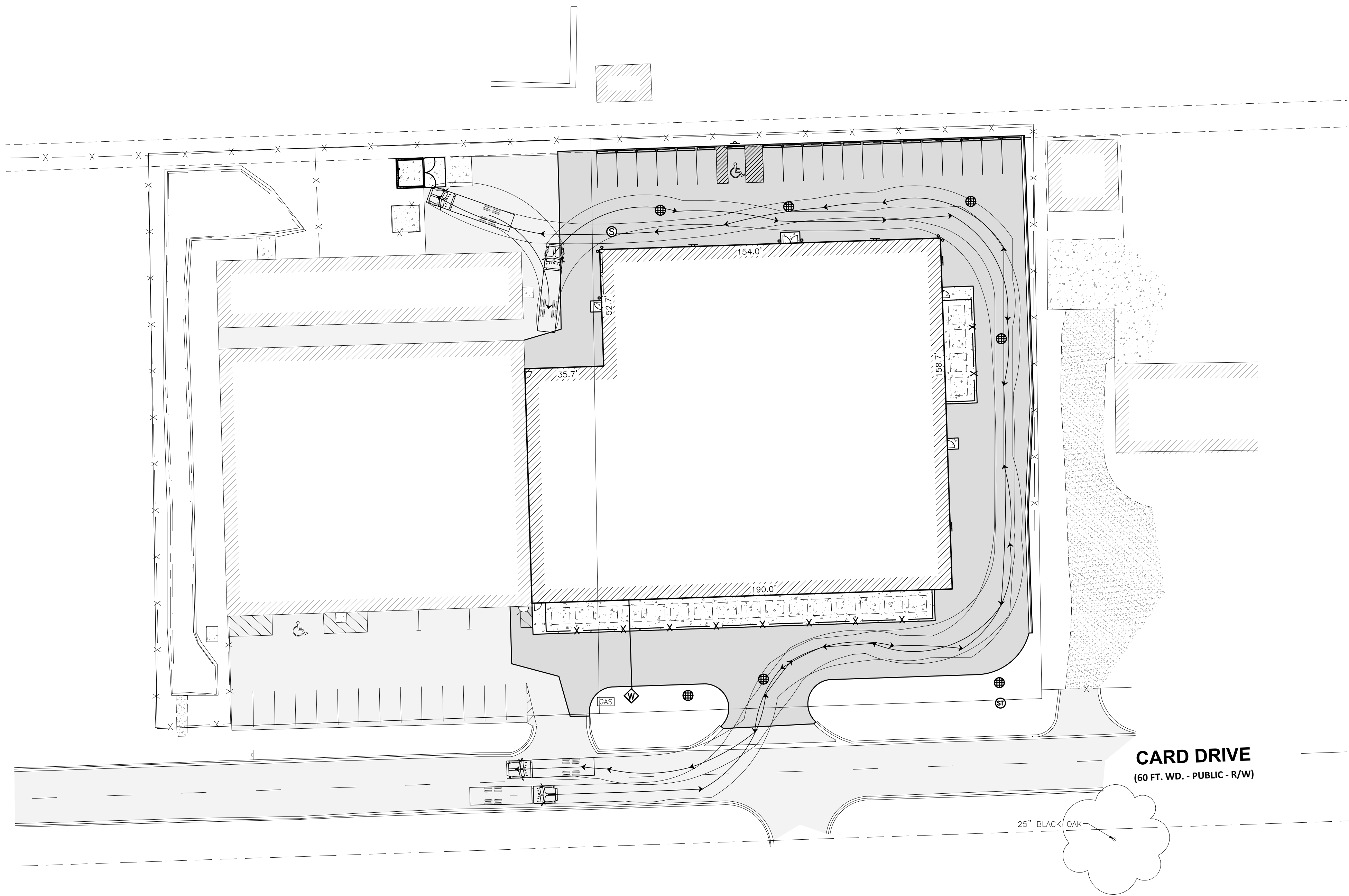


SU-40 DELIVERY TRUCK



SU-40

Width : 8.00
Track : 8.00
Lock to Lock Time : 6.0
Steering Angle : 31.8



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SU-40 DELIVERY TRUCK CIRCULATION

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CITY OF BURTON, GENESEE COUNTY, MICHIGAN

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SITE PLAN	9/15/2021

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

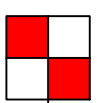
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DESIGN BY: BS, TB
CHECK BY: AP

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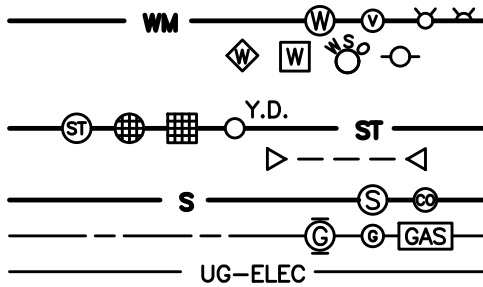
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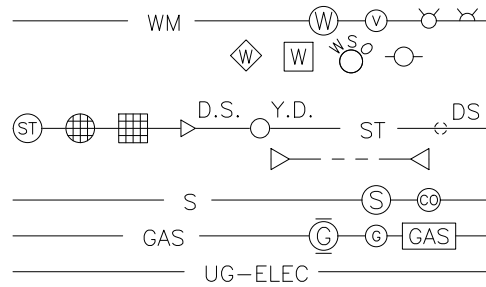


UTILITY LEGEND

PROPOSED



EXISTING



WATER MAIN, MH, VALVE IN BOX, HYDRANT
WATER WELL, METER, STOP BOX, POST INDICATOR VALVE
STORM SEWER, MH, CB, INLET, DOWN SPOUT, YARD DRAIN
CULVERT/ END SECTION
SANITARY SEWER, MH, CLEAN OUT
UG GAS, MH, VALVE, LINE MARKER
UG ELEC (ELEC, CABLE, FIBER)

GCDC-WWS STANDARD NOTES

- EXTENSION OF PUBLIC UTILITIES:**
All public sanitary sewer and/or water main SHALL be extended to the furthest limits of the property, including corner lots, with the pipe size and material approved by GCDC-WWS. This is necessary for plan approval. For water service of 1" or less on a building on a corner lot, the requirements to extend the public watermain and/or sanitary sewer along both property lines will be reviewed. Final determination shall be made by GCDC-WWS.
- WATERMAIN LOOPING:**
All public watermains shall be looped whenever possible. The pipe size requirements shall be approved by GCDC-WWS.
- INDUSTRIAL PRETREATMENT PROGRAM (IPP):** This permit is required for all commercial (non-residential) and industrial discharges. The OWNER shall obtain an Industrial Pretreatment Discharge Permit prior to the issuance of a Sewer Connection Permit. Industrial Discharge Permits are non-transferable. Changes in facility use will require a new Industrial Discharge Permit. For more information call the Anthony Ragnone Treatment Plant at (810) 232-7662.
- SOIL EROSION:**
The DEVELOPER and/or OWNER shall submit a detailed Soil Erosion and Sedimentation Control plan and obtain an Act 451 Part 91, Soil Erosion and Sedimentation Control permit. This includes the payment of fees and the providing of necessary bonds. No earth changes or excavation shall be started prior to the issuance of this permit. The DEVELOPER and/or OWNER shall protect all existing and proposed storm sewer facilities on and adjacent to the site during excavation and construction. All sediment shall be contained on site. Any silt in county drains, storm sewer, culverts, etc. as a result of this project, shall be removed by the DEVELOPER and/or OWNER at the cost of the DEVELOPER and/or OWNER.
- FLOOD PLAIN OR WETLAND CONSTRUCTION:** The DEVELOPER and/or OWNER shall apply to the Michigan Department of Environmental Quality for a permit for the alteration and/or occupation of a flood plain or floodway, as required under PA 451. Evidence of this permit may be required prior to plan approval by GCDC-WWS.
- NPDES STORM WATER DISCHARGE PERMIT:** The owner of the property shall obtain a NPDES Storm Water Discharge permit for construction activities from MDEQ as required under Public Act 451. The notice of coverage form shall be submitted through GCDC-WWS with the Soil Erosion Control permit application. All MDEQ fees shall accompany the Notice of Coverage. Evidence of this permit may be required prior to plan approval by GCDC-WWS.
- GENESEE COUNTY PERMIT TO CONSTRUCT A PUBLIC UTILITY:**
After the approval of this preliminary plat or site plan, the DEVELOPER shall submit a detailed plan for construction of all public sanitary sewer and watermain. The plans must have GCDC-WWS approval, a 5-permit issued, and approval from the MDEQ prior to beginning construction.
- GENESEE COUNTY ROAD COMMISSION PERMIT:** The DEVELOPER shall obtain a permit from the Genesee County Road Commission to perform work within the Genesee County Road Commission Right-of-Way. All fees for the permit, bonds and insurances are the responsibility of the developer.
- MUNICIPALITY SANITARY SEWER AND WATER PERMIT:**
Prior to the issuance of a building permit by the local municipality, the developer shall be required to obtain a sanitary sewer and/or water tap-in permit from the local municipality, if authorized, or GCDC-WWS.
- STATE CONSTRUCTION PERMITS:**
The sanitary sewer and watermain construction permits from the Michigan Department of Environmental Quality shall be submitted to the MDEQ after approval of GCDC-WWS. Construction shall not begin until these state permits are issued.

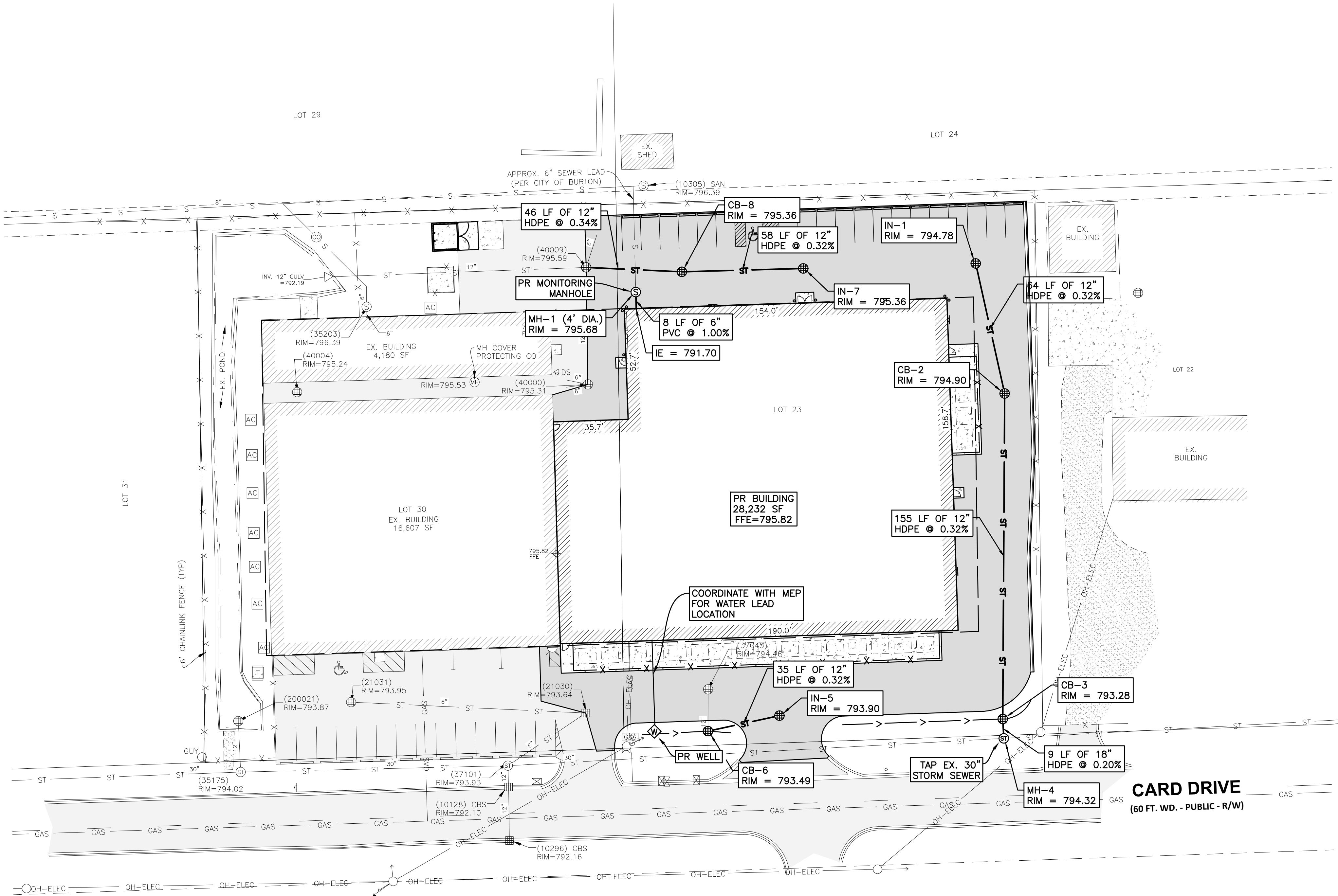
STRUCTURE SCHEDULE

PROPOSED SANITARY SEWER		
STRUCTURE	RIM ELEV.	PIPES
MH-1	795.68	6" S IE= 791.62

PROPOSED STORM SEWER		
STRUCTURE	RIM ELEV.	PIPES
CB-2	794.90	12" S IE= 787.91 12" N IE= 787.91
CB-3	793.28	18" S IE= 787.02 12" N IE= 787.42
CB-6	793.49	12" E IE= 791.64
CB-8	795.36	12" W IE= 792.77 12" E IE= 792.77
EX CB 40009	795.59	12" E IE= 792.62 12" W IE= 792.62 12" S IE= 792.58
IN-1	794.78	12" S IE= 788.12
IN-5	793.90	12" W IE= 791.75
IN-7	795.36	12" W IE= 792.96
MH-4	794.32	18" N IE= 787.00 30" E IE= 781.98 30" W IE= 781.98

UTILITY NOTES

- SANITARY "MH" SHALL HAVE EJIW 1020 FRAME WITH TYPE A COVER.
- PROPOSED BUILDING ADDITION TO HAVE SPRINKLED FIRE SUPPRESSION.
- "IN" & "CB" STRUCTURES SHALL HAVE EJIW 1020 FRAME WITH TYPE M1 GRATE.
- STORM "MH" STRUCTURES SHALL HAVE EJIW 1040 FRAME WITH A TYPE A PERFORATED COVER.
- MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.



STORM SEWER QUANTITIES

QTY	UNIT	ITEM
358	LF	12" HDPE
9	LF	18" HDPE
3	EA	2' INLET
1	EA	4' MANHOLE
4	EA	4' CATCH BASIN

SANITARY SEWER QUANTITIES

QTY	UNIT	ITEM
8	LF	6" PVC SDR 23.5
1	EA	4' MANHOLE

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CLIENT :

Brivar
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UTILITY PLAN

T-REX
3285 CARD DRIVE,
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

DATE	7/28/2021
PLAN SUBMITTALS/REVISIONS	8/06/2021
90% PLAN SUBMITTAL	9/13/2021
SITE PLAN SUBMITTAL	
SITE PLAN	

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'

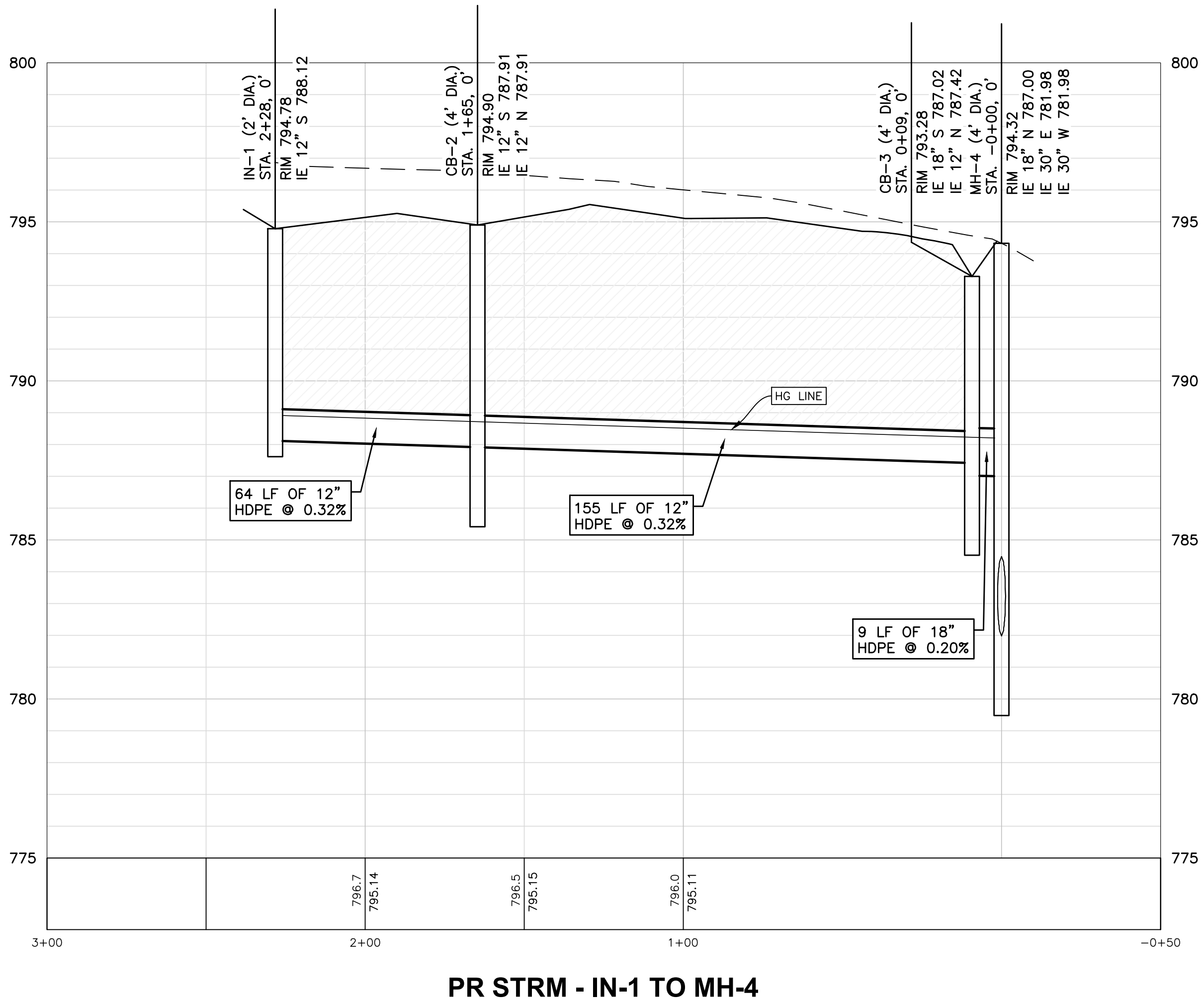
0 1/2" 1"

FIELD:
DRAWN BY: CW, GB
DESIGN BY: DC, MN
CHECK BY: BS, TB

C-3.0

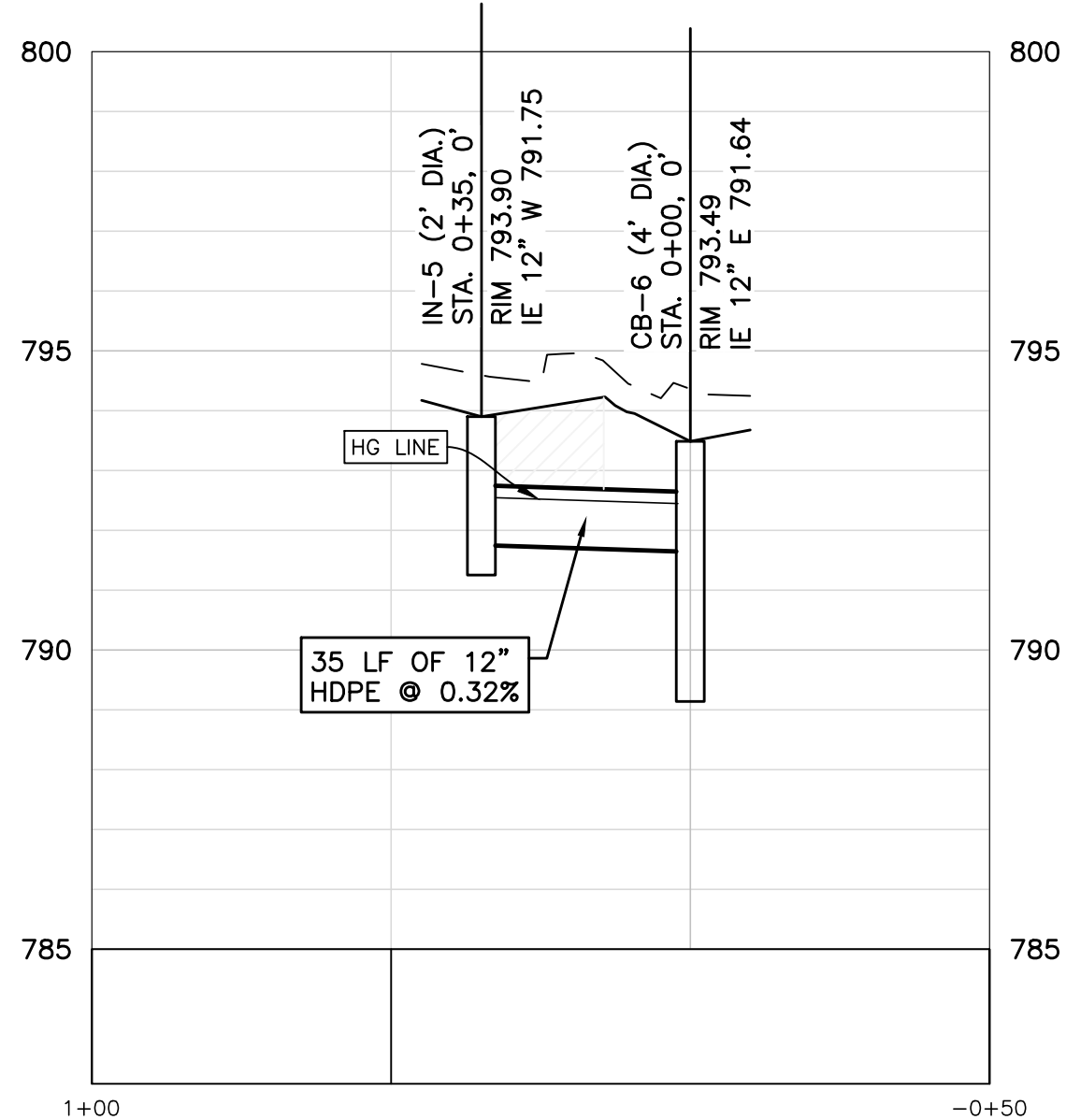
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Attachment T-REX-CIVIL SET Layout-20210915 (6207 - SPR #21-51)



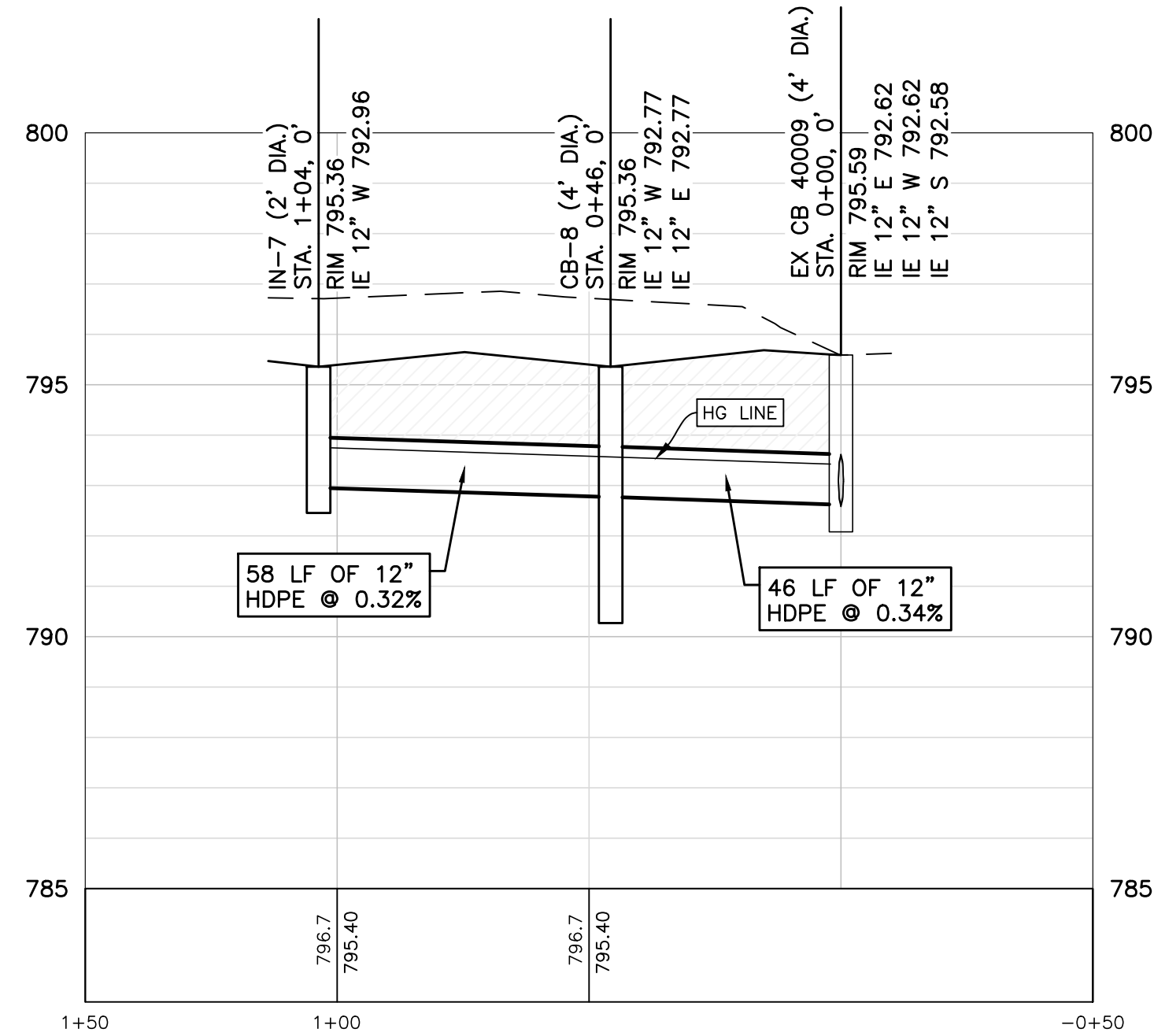
PR STRM - IN-1 TO MH-4

PROFILE SCALE
HORIZ: 1"=30'
VERT: 1"=3'



PR STRM - IN-5 TO CB-6

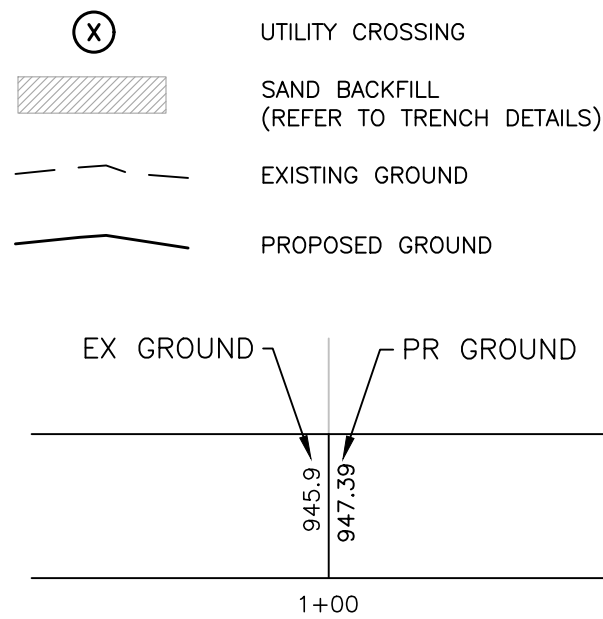
PROFILE SCALE
HORIZ: 1"=30'
VERT: 1"=3'



PR STRM - IN-7 TO EX CB 40009

PROFILE SCALE
HORIZ: 1"=30'
VERT: 1"=3'

PROFILE LEGEND



NOTES

- SAND BACKFILL AND BEDDING TO BE MDOT CL II.
- MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.

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UTILITY PROFILES

T-REX
3265 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

DATE	7/28/2021
PLAN SUBMITTALS/REVISIONS	
90% PLAN SUBMITTAL	8/05/2021
SITE PLAN SUBMITTAL	9/13/2021
SITE PLAN	

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'
0 1/2" 1"

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

C-3.1

NOT FOR CONSTRUCTION

Attachment: T-REX-CIVIL SET Layout-20210915 (5207 - SPR #21-51)

CONSTRUCTION SEQUENCE		OPERATION TIME SCHEDULE -- BEGINNING SEPTEMBER 2021					
		SEP	OCT	NOV	DEC	JAN	FEB
1	CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON APPROVED PLANS.						
2	REMOVE ALL TOPSOIL AND ORGANIC MATTER. TOPSOIL MAY BE STORED ON SITE IN DESIGNATED AREA TO BE USED FOR FUTURE PLANTING AND FILL AREAS. TRUCK REMAINING TOP SOIL OFFSITE AND PROPERLY DISPOSE.						
3	ROUGH GRADE AND INSTALL NEW UNDERGROUND UTILITIES. PLACE INLET FILTERS AT PROPOSED CATCH BASINS THROUGHOUT SITE.						
4	CONSTRUCT BUILDING.						
5	FINISH GRADE AROUND BUILDING AND STABILIZE AS SOON AS POSSIBLE. STABILIZE ALL DISTURBED AREAS WITH CLASS A SEED AND MULCH. IN AREAS OF SLOPES OF 1:4 OR STEEPER, CONTRACTOR TO SEED AND INSTALL PEGGED IN PLACE EROSION CONTROL BLANKETS.						
6	REPAIR/CLEAN INLET FILTERS AS REQUIRED.						
7	INSTALL FINAL LANDSCAPING PER SEPARATE LANDSCAPE PLAN.						
8	REMOVE TEMPORARY SOIL EROSION MEASURES ONCE SEEDING VEGETATION HAS BEEN ESTABLISHED. CLEAN ALL AFFECTED STORM STRUCTURES AS NECESSARY.						

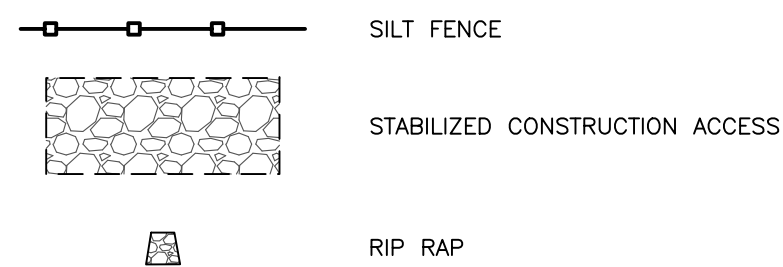
SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE
(<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>)

SOIL TYPE LIMIT AND LABEL
CvraaB: CONOVER LOAM, 0-4% SLOPES

NOTE: THIS SOILS TYPE ENCOMPASSES THE ENTIRE SITE

SESC LEGEND



EROSION CONTROL QUANTITIES

Disturbed Area: 1.34 Acres

QTY	UNIT	ITEM
627	LF	SILT FENCE
14	EA	INLET FILTER
1	EA	STABILIZED CONSTRUCTION ACCESS

NOTE: QUANTITIES ARE FOR ENTIRE SITE

BENCHMARKS

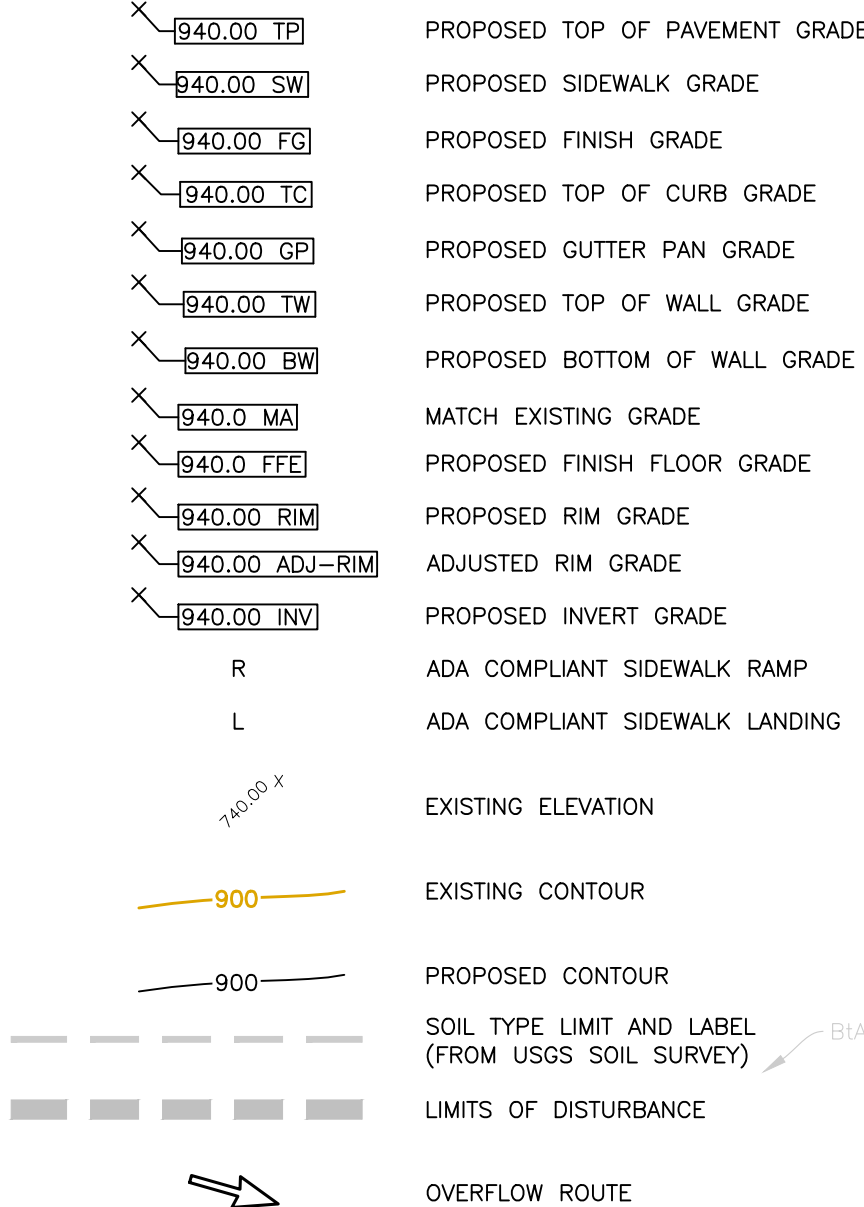
DATUM: NAVD88

BM A:
RAIL ROAD SPIKE ON NORTH SIDE UTILITY POLE, 27'± SOUTH OF CENTERLINE CARD DRIVE & 85'± WEST OF SUBJECT'S SOUTHWEST PROPERTY CORNER.
ELEV = 795.76

BM B:
RAIL ROAD SPIKE ON NORTH SIDE UTILITY POLE LOCATED AT SUBJECT'S SOUTHEAST PROPERTY CORNER.
ELEV = 794.98

BM C:
60D NAIL IN 25" BLACK OAK, 35'± SOUTH OF CENTERLINE CARD DRIVE & 153'± EAST OF SUBJECT'S ACCESS DRIVE TO SITE.
ELEV: 797.58

GRADING LEGEND



DTMB SOIL EROSION & SEDIMENTATION CONTROL MEASURES

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET (DTMB)

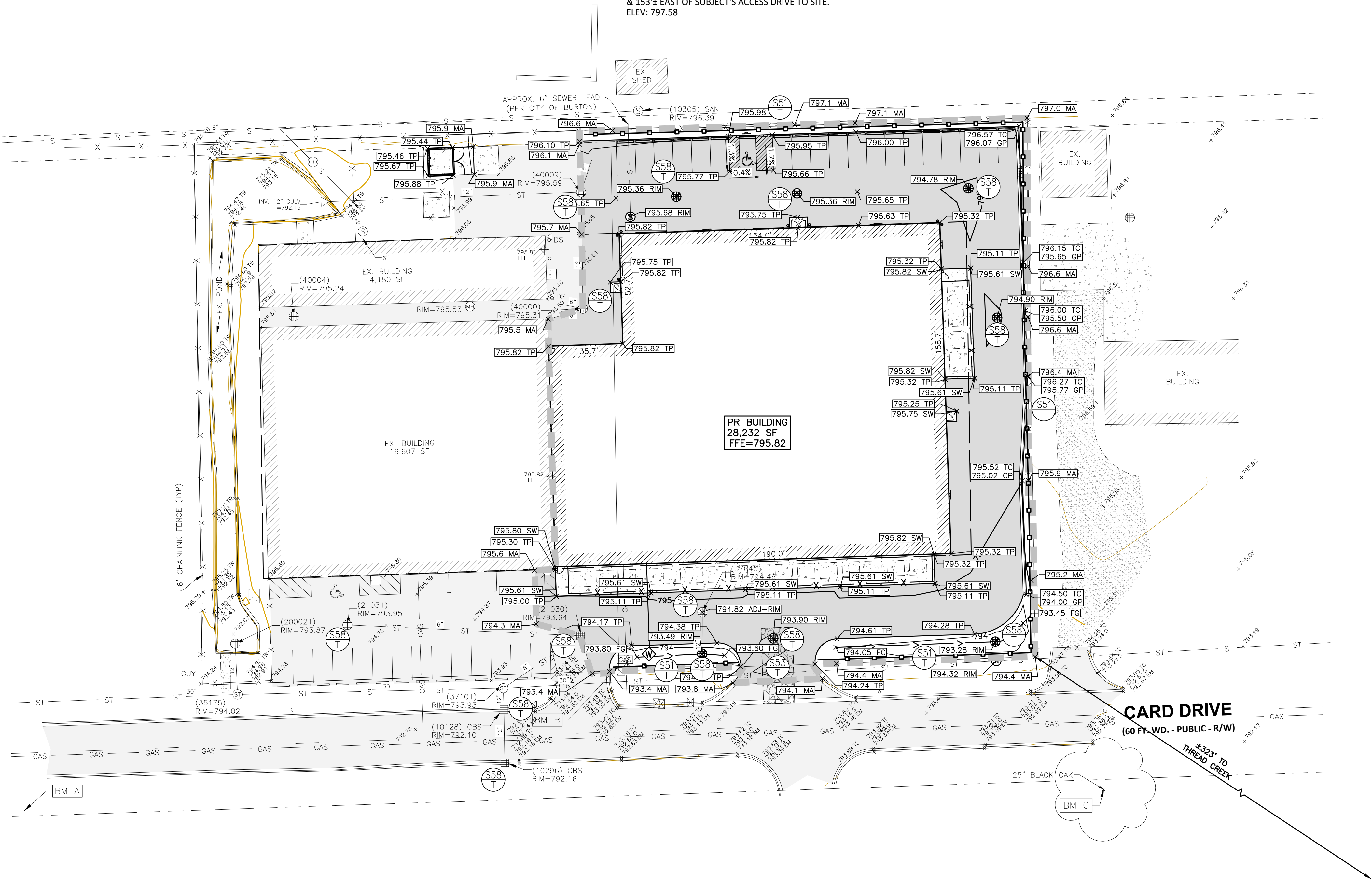
EROSION CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E6	MULCH		FOR USE IN AREAS SUBJECT TO EROSION SURFACE FLOWS OR SEVERE WIND OR ON NEWLY SEEDD AREAS.
E8	PERMANENT SEEDING		STABILIZATION METHOD UTILIZED ON SITES WHERE EARTH CHANGE HAS BEEN COMPLETED (FINAL GRADING ATTAINED).
SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
SS1	SILT FENCE		USE ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW FROM ENTERING THESE AREAS.
SS3	STABILIZED CONSTRUCTION ACCESS		USED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.
SS5	SEDIMENT BASIN		AT THE OUTLET OF DISTURBED AREAS AND AT THE LOCATION OF A PERMANENT DETENTION BASIN.
SS8	INLET PROTECTION FABRIC DROP		USE AT STORMWATER INLETS, ESPECIALLY AT CONSTRUCTION SITES.
EROSION & SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ES31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONSTRUCTED AND EXISTING FLOW CORRIDORS.
		XX T TEMPORARY	XX P PERMANENT

EROSION CONTROL STANDARDS

- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE.
- DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAS BEEN ACCOMPLISHED.
- STAGING OF THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLACES AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.
- SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- A CERTIFIED STORM WATER OPERATOR WILL BE NAMED ON THE MDEQ NOTICE OF COVERAGE FOR NPDES AS REQUIRED.
- ALL DISTURBED AREAS ARE TO BE TOP SOILED AND SEEDDED WITH THE FOLLOWING MIN RATIO:
TOP SOIL 3" IN DEPTH, GRASS SEED 210 LBS PER ACRE, FERTILIZER 150 LBS PER ACRE, STRAW MULCH 3" DEPTH 1.5 TO 2 TONS PER ACRE.

SOIL EROSION CONTROL MAINTENANCE SCHEDULE AND NOTES.

- CONTRACTOR MUST OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCING WORK.
- EARTHWORK SHALL BE LIMITED TO THE PROPOSED SITE AS SHOWN ON THE PLAN.
- CONTRACTOR SHALL INSPECT THE SOIL EROSION/SEDIMENTATION CONTROL DEVICES ONCE A WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. ANY DAMAGE TO EROSION CONTROL MEASURES MUST BE REPAIRED IMMEDIATELY.
- ALL MUD OR DEBRIS TRACKED ONTO EXISTING PUBLIC ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT-UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR RE-BACKFILL THE SILTATION FENCE SHOULD IT FAIL OR BE DAMAGED DURING CONSTRUCTION.
- PERMANENT STABILIZATION MUST BE COMPLETED WITHIN 30 DAYS OF FINAL GRADING.
- ACCESS ROADS MUST BE MAINTAINED AS NECESSARY, TO KEEP THEM EFFECTIVE, NEW LAYERS OF STONE MAY BE ADDED AS OLD LAYERS BECOME COMPACTED. STEPS SHOULD ALSO BE TAKEN TO REPAIR THE ACCESS ROADS IF RUTS OR PONDING WATER APPEARS.
- INLET FILTERS SHOULD BE INSPECTED FOR BUILDUP OF SILT AND OTHER DEBRIS. THIS IS EVIDENT IF GEOTEXTILE/SOD STRUCTURE IS CAUSING FLOODING. MAINTENANCE WOULD CONSIST OF REMOVING OF SEDIMENTS WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTER IS BEYOND THIS LEVEL OF REPAIR, IT MAY BE NECESSARY TO REPLACE BOTH THE SOD AND GEOTEXTILE FILTER.
- IF SOIL EROSION/SEDIMENT CONTROL MEASURES ARE INADEQUATE FOR THE SITE. THE PROPER EROSION CONTROL AUTHORITY MUST BE NOTIFIED.



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GRADING AND SESC PLAN

T-REX

3285 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

DATE	7/28/2021	8/06/2021	9/13/2021
PLAN SUBMITTALS/REVISIONS			
30% PLAN SUBMITTAL			
SITE PLAN SUBMITTAL			

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'

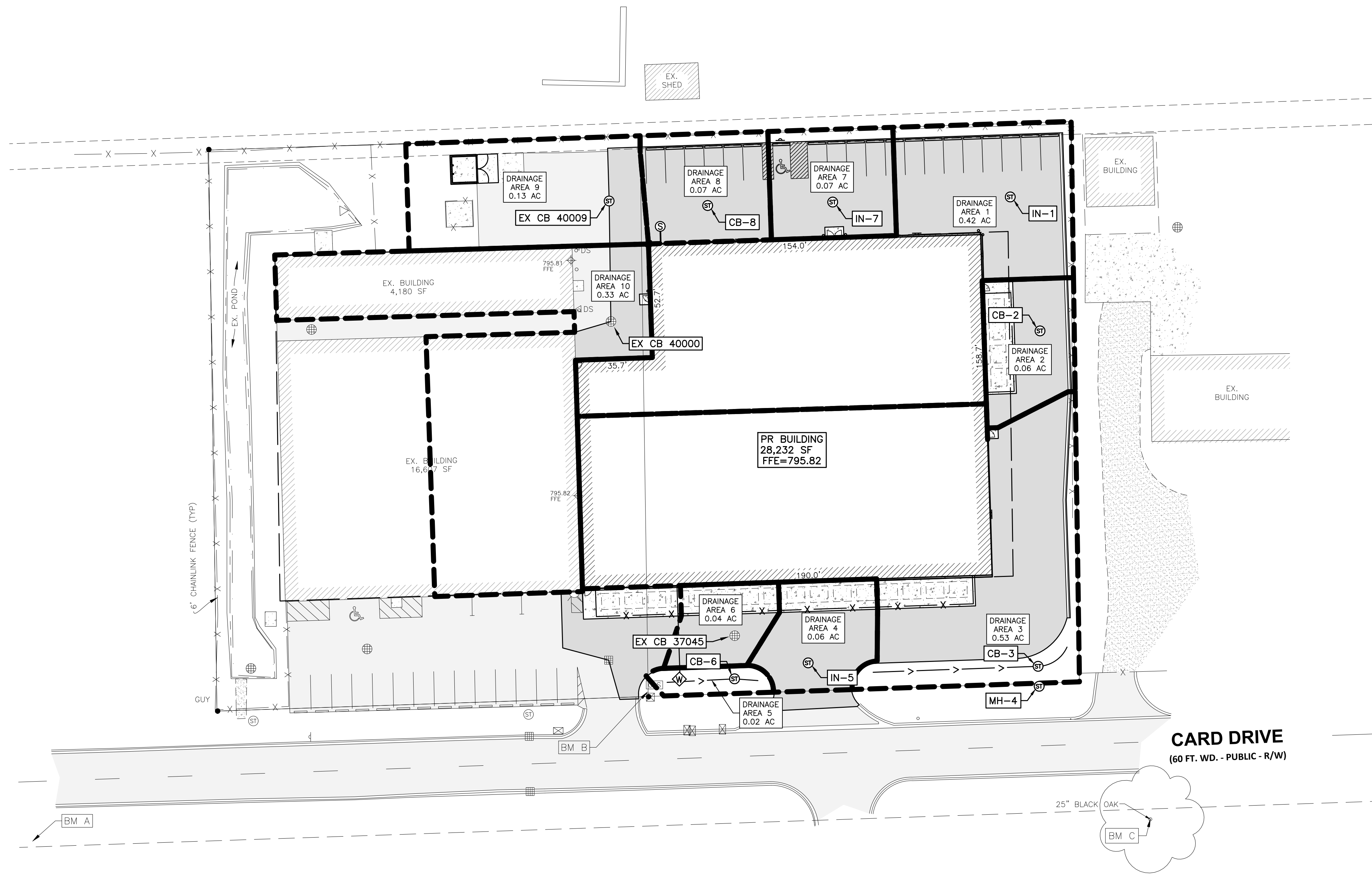
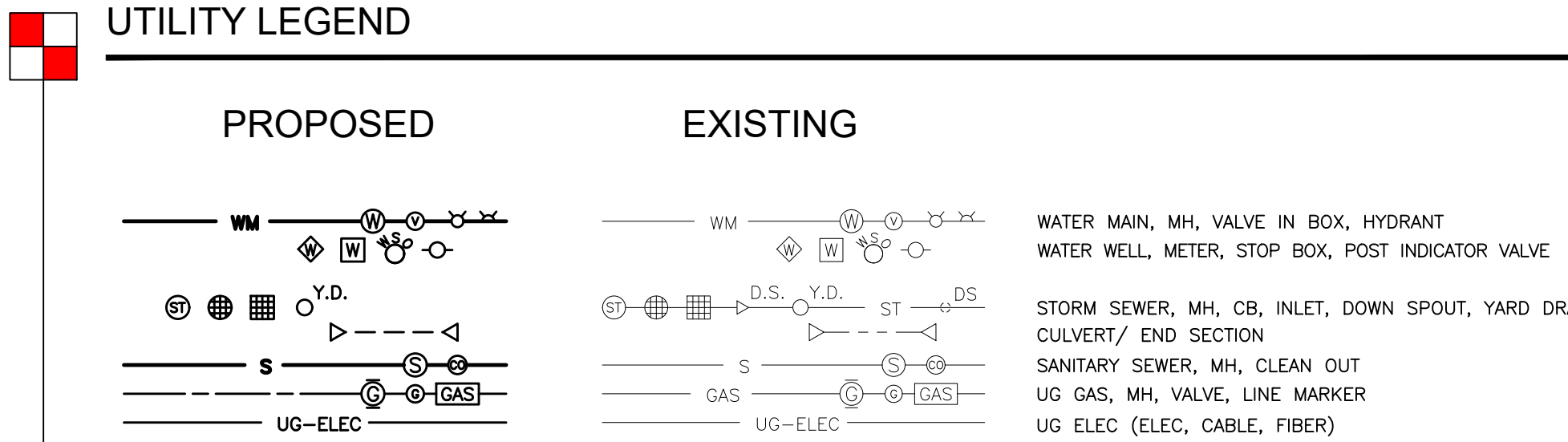
0 1/2" 1"

FIELD:
DRAWN BY: CW, GB
DESIGN BY: DC, MN
CHECK BY: BS, TB
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C-7.0

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DRAINAGE AREA PLAN

T-REX
3265 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
90% PLAN SUBMITTAL	7/28/2021
SITE PLAN SUBMITTAL	8/05/2021
SITE PLAN	9/13/2021

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: 1" = 30'
0 1/2" 1"

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

C-9.0

Attachment: T-REX-CIVIL SET Layout-2010915 (5207 - SPR #21-51)

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EXISTING COMPOUND RUNOFF COEFFICIENT

	AREA (SF)	AREA (AC)	C
OVERALL	51,947	1.19	
CONTRIBUTING	51,947	1.19	
FLOWING OFF	0	0.00	
$A \times C$			
EX BUILDING	3,155		0.95 2,997
EX PAVEMENT	8,068		0.95 7,665
PR BUILDING	0		0.95 0
PR PAVEMENT	0		0.95 0
UNDEVELOPED AREA	3,217		0.25 804
GRAVEL	37,507		0.80 30,006
DISTURBED GROUND			0.35 0
TOTALS	51,947		41,472

$$COMPOUND\ C = \frac{TOTAL\ A \times C}{CONTRIBUTING\ AREA} = \frac{41,472}{51,947} = 0.80$$

EXISTING VOLUME REQUIRED BASED ON 10-YEAR STORM EVENT

$$T = -25 + \sqrt{\frac{6562.5}{Q_0}} = 156.14\ MIN$$
$$V_{10} = \frac{10500 \times T}{T + 25} - 40 \times Q_0 \times T = 7,802\ CF/AC\ IMPERVIOUS$$
$$V_{10} = V_{10} \times A \times C = 7,428\ CF$$

DIFFERENCE IN VOLUME REQUIRED BETWEEN EXISTING
AND PROPOSED SITE (TO BE SENT TO EXISTING DETENTION BASIN)
932 CF

PROPOSED AREA BEING SENT TO EXISTING BASIN
5843 SF
0.13 AC

PROPOSED VOLUME BASED ON 10-YEAR STORM EVENT

$$T = -25 + \sqrt{\frac{6562.5}{Q_0}} = 156.142\ MIN$$
$$V_{10} = \frac{10500 \times T}{T + 25} - 40 \times Q_0 \times T = 7,802\ CF/AC\ IMPERVIOUS$$
$$V_{10} = V_{10} \times A \times C = 940\ CF$$

EXISTING DETENTION BASIN VOLUME

DETENTION AREA (A) = 3779 SF

DETENTION DEPTH (H) = 2.5 FT

DETENTION VOLUME (V)

$V = A \times H = 9,448\ CF$

PROPOSED 10-YEAR STORM LEVEL

DETENTION AREA (A) = 3799 SF

10-YEAR VOLUME EXISTING (Ve) = 5549 CF

10-YEAR VOLUME PROPOSED (Vp) = 940 CF

10-YEAR LEVEL (H)

$H = (V_e + V_p) \div A = 1.7\ FT$

PROPOSED COMPOUND RUNOFF COEFFICIENT

	AREA (SF)	AREA (AC)	C
OVERALL	51,947	1.19	
CONTRIBUTING	51,947	1.19	
FLOWING OFF	0	0.00	
$A \times C$			
EX BUILDING	0		0.95 0
EX PAVEMENT	0		0.95 0
PR BUILDING	24,992		0.95 23,742
PR PAVEMENT	22,496		0.95 21,371
UNDEVELOPED AREA	0		0.25 0
WOODED AREA	0		0.30 0
DISTURBED GROUND	4,459		0.35 1,561
TOTALS	51,947		46,674

$$COMPOUND\ C = \frac{TOTAL\ A \times C}{CONTRIBUTING\ AREA} = \frac{46,674}{51,947} = 0.90$$

VOLUME REQUIRED BASED ON 10-YEAR STORM EVENT

$$T = -25 + \sqrt{\frac{6562.5}{Q_0}} = 156.14\ MIN$$
$$V_{10} = \frac{10500 \times T}{T + 25} - 40 \times Q_0 \times T = 7,802\ CF/AC\ IMPERVIOUS$$
$$V_{10} = V_{10} \times A \times C = 8,359\ CF$$

STORM SEWER DESIGN												MONUMENT ENGINEERING GROUP ASSOCIATES, LLC												
Q = C I A Q = A x 1.486/n x R ^{2/3} x S ^{1/2} I = 175/(t+25)				t = 20 n1 = 0.01 HDPE & PVC n2 = 0.013 CONC.								298 VETERANS DRIVE FOWLERVILLE, MI 48836 517-223-3512												
	FROM STR TO STR	AREA A	COEFF. C	A x C	AREA TOTAL At ac.	TOTAL C x A	TIME t min.	INT. I in/hr	FLOW Q c.f.s.	PIPE CAP. c.f.s.	PIPE AREA sq ft	PIPE LENGTH ft	PIPE DIA. in	PIPE SLOPE %	MIN PIPE SLOPE	H.G. SLOPE %	VEL. FULL ft/sec	TIME FLOW min.	H.G. ELEV. UP STREAM	H.G. ELEV. DOWN STREAM	INVERT ELEV. UP STREAM	INVERT ELEV. DOWN STREAM	RIM ELEV. UP STREAM	RIM ELEV. DOWN STREAM
		ac.																						
MAIN RUN	IN1-CB2	0.42	0.90	0.378	0.420	0.378	20.00	3.89	1.47	2.01	0.79	64	12	0.32	0.30	0.32	2.56	0.42	788.92	788.71	788.12	787.91	794.78	794.90
	CB2-CB3	0.06	0.90	0.054	0.480	0.432	20.42	3.85	1.66	2.01	0.79	155	12	0.32	0.30	0.32	2.56	1.01	788.71	788.22	787.91	787.42	794.90	793.28
	CB3-MH4	0.53	0.90	0.477	1.010	0.909	21.42	3.77	3.43	4.69	1.77	9	18	0.20	0.18	0.20	2.66	0.06	788.22	788.20	787.02	787.00	793.28	794.32
MAIN RUN	IN5-CB6	0.06	0.90	0.054	0.060	0.054	20.00	3.89	0.21	2.01	0.79	35	12	0.32	0.30	0.32	2.56	0.23	792.55	792.44	791.75	791.64	793.90	793.49
	CB6-EX MAIN	0.02	0.90	0.018	0.120	0.108	20.23	3.87	0.42	2.01	0.79	11	12	0.32	0.30	0.32	2.56	0.07	782.99	782.95	791.64	782.15	793.49	793.89
MAIN RUN	IN7-CB8	0.07	0.90	0.063	0.070	0.063	20.00	3.89	0.25	2.01	0.79	58	12	0.32	0.30	0.32	2.56	0.38	793.76	793.57	792.96	792.77	795.07	795.07
	CB8-40009	0.07	0.90	0.063	0.140	0.126	20.38	3.86	0.49	2.08	0.79	46	12	0.34	0.30	0.34	2.64	0.29	793.57	793.42	792.77	792.62	795.07	795.59
	40009-EX ES	0.13	0.90	0.117	0.600	0.540	20.67	3.83	2.07	2.08	0.79	125	12	0.34	0.30	0.34	2.64	0.79	793.42	792.99	792.62	792.19	795.59	792.19
LATERAL	40000-40009	0.33	0.90	0.297	0.330	0.297	20.00	3.89	1.16	2.01	0.79	56	12	0.32	0.30	0.32	2.56	0.36	793.75	793.57	792.95	792.77	795.31	795.59
LATERAL	37045-CB6	0.04	0.90	0.036	0.040	0.036	20.00	3.89	0.14	2.01	0.79	20	12	0.32	0.30	0.32	2.56	0.13	792.50	792.44	791.70	791.64	794.82	793.49



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CLIENT :



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STORM WATER CALCULATIONS

T-REX
3265 CARD DRIVE
PART OF THE NW 1/4, SEC. 33, T7N-R7E
CITY OF BURTON, GENESEE COUNTY, MICHIGAN

DATE	7/28/2021	8/08/2021	9/13/2021				
PLAN SUBMITTALS/REVISIONS							
30% PLAN SUBMITTAL							
SITE PLAN SUBMITTAL							
SITE PLAN							

ORIGINAL ISSUE DATE:
7/28/2021

PROJECT NO: 21-158

SCALE: NA
0 1/2" 1"

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

C-9.1

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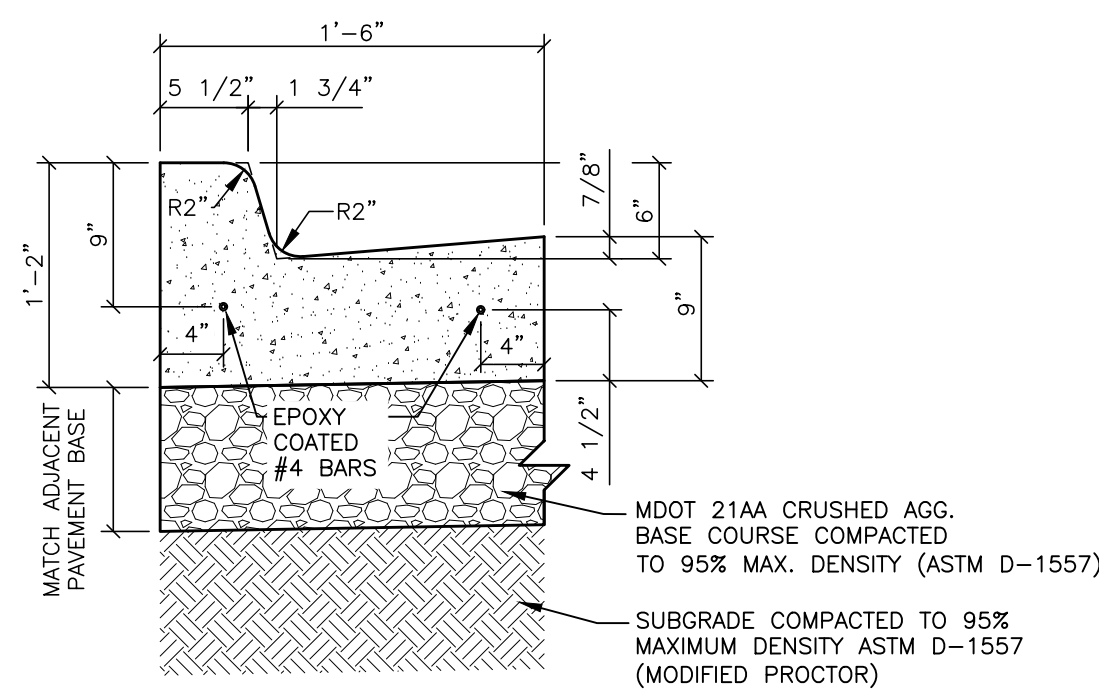
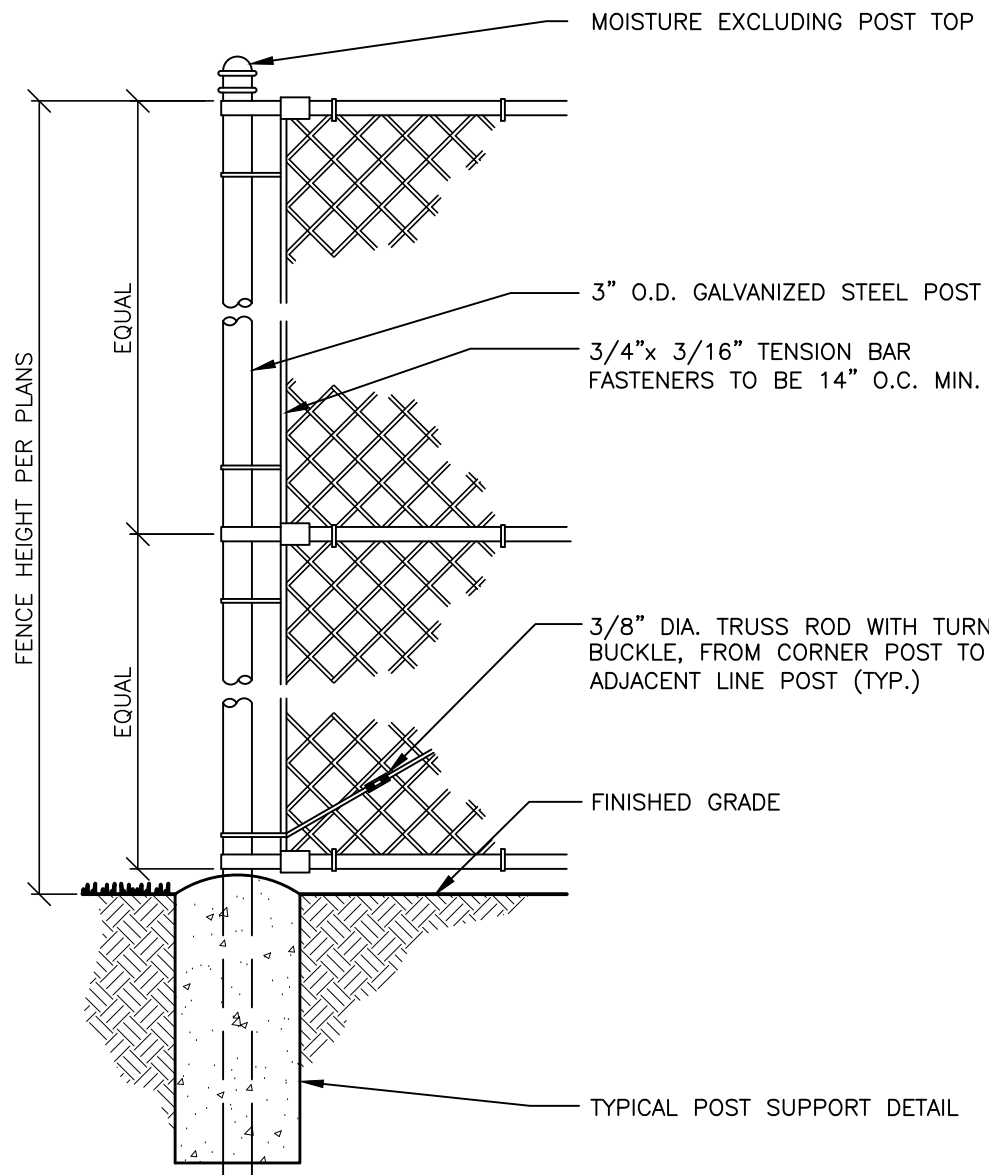
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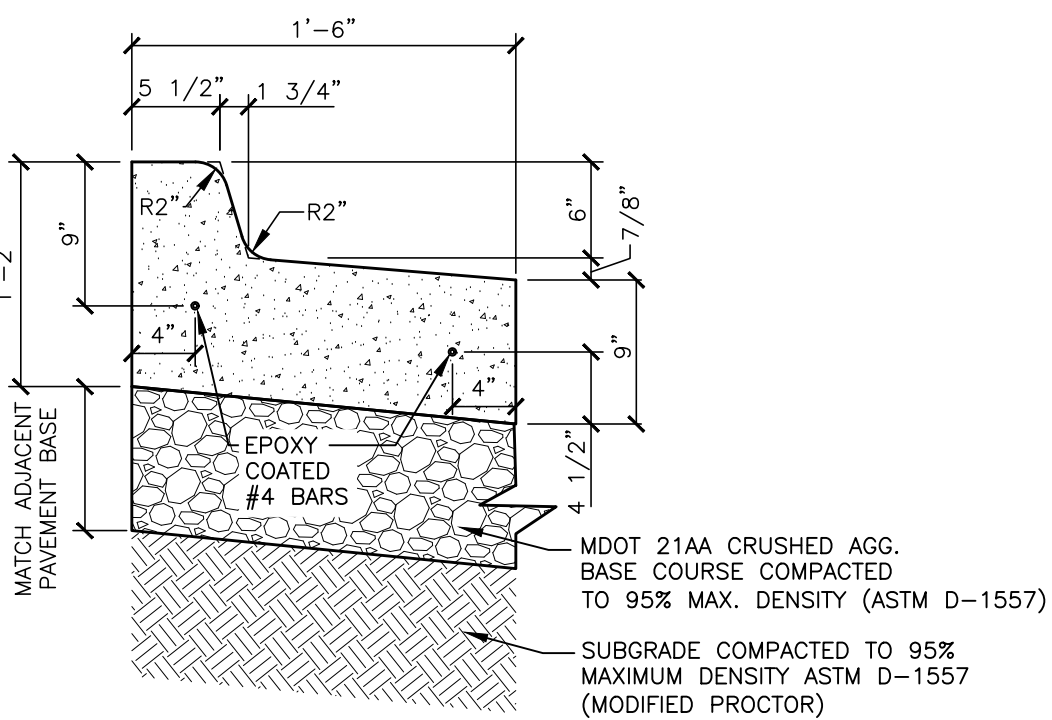
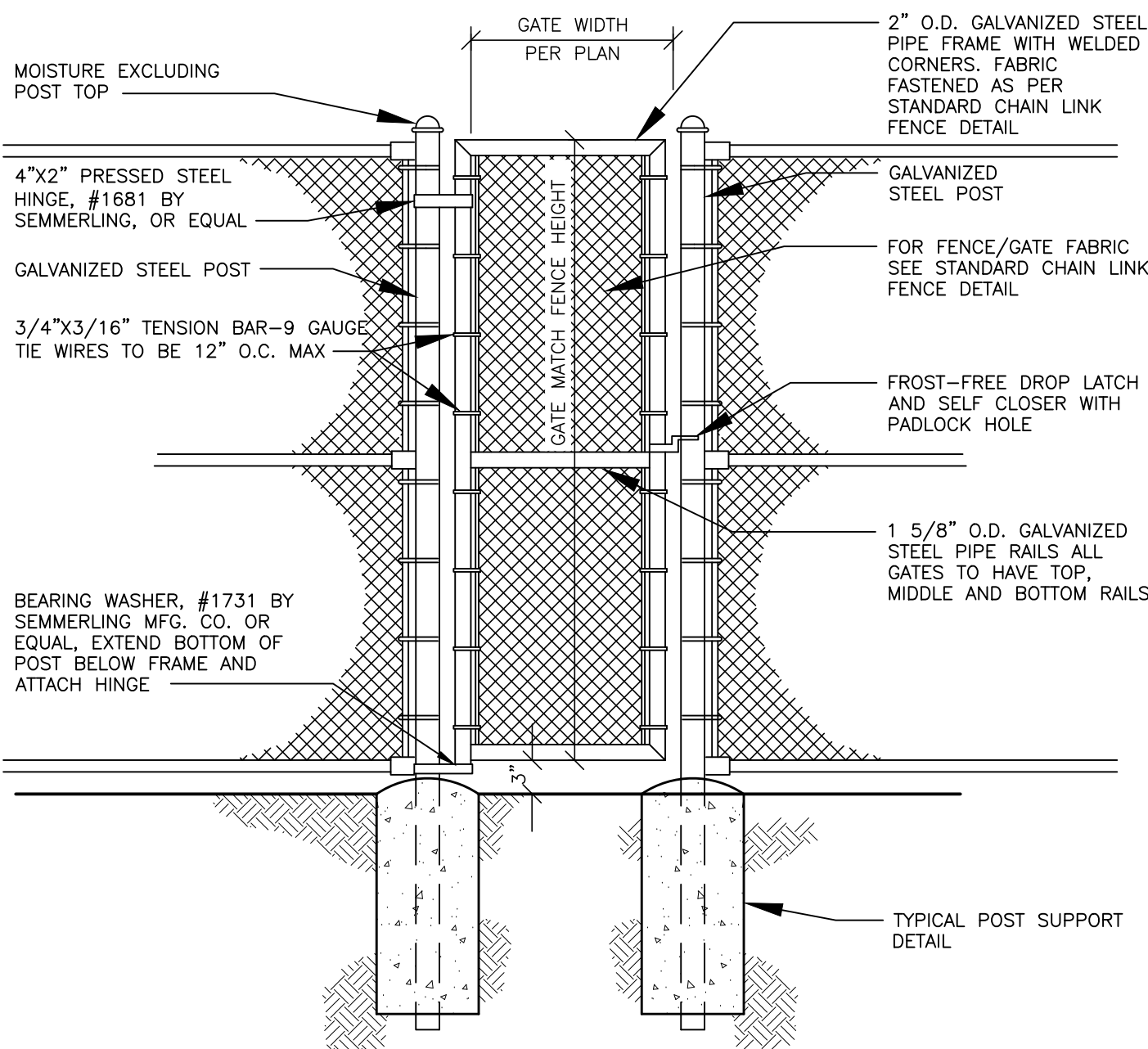


FENCE DETAIL - CHAIN LINK - TERMINAL-CORNER POST

CURB AND GUTTER DETAIL - CONCRETE -
REVERSE - 18" W 6" H 14" D



GATE DETAIL - CHAIN LINK - ACCESS - SINGLE SWING



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90% PLAN SUBMITTAL	7/28/2021
SITE PLAN SUBMITTAL	8/06/2021
SITE PLAN	9/15/2021

ORIGINAL ISSUE DATE:

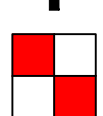
PROJECT NO: 21-158

SCALE: N/A

FIELD: CW, GB
DRAWN BY: DC, MN
DESIGN BY: BS, TB
CHECK BY: AP

C-11.1

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GRADING AND EARTHWORK SPECIFICATIONS

- ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO ACQUAINT HIMSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUB-SURFACE SOIL CONDITIONS AND GROUND WATER CONDITIONS TO HIS OWN SATISFACTION PRIOR TO BIDDING. NO MODIFICATIONS TO THE UNIT PRICES BID FOR ANY ITEM WILL BE MADE DUE TO VARIABLE SUB-SURFACE CONDITIONS. DETERMINING, IF DETERMINED NECESSARY BY THE CONTRACTOR, BY WELL POINTING OR DEEP WELLS WILL BE INCIDENTAL TO THE INSTALLATION COST OF THE ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING DETERMINED TO HIS SATISFACTION PRIOR TO THE SUBMISSION OF HIS BID THE CONFIRMATION OF THE GROUND, THE CHARACTER AND QUALITY OF THE SUBSTRATA, THE TYPES AND QUANTITIES OF MATERIALS TO BE ENCOUNTERED, THE NATURE OF THE GROUNDWATER CONDITIONS, THE PROSECUTION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS INCLUDING CLIMATIC CHANGES, THE TIME OF YEAR IN WHICH CONSTRUCTION WILL TAKE PLACE AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT.
- PRIOR TO COMMENCING THE EXCAVATION THE CONTRACTOR SHALL SUBMIT A PLAN OF HIS PROPOSED OPERATIONS AND TIME SCHEDULE TO THE OWNER & OWNER'S REPRESENTATIVE FOR THEIR APPROVAL.
- THE CONTRACTOR SHALL CONSIDER, AND HIS PLAN FOR EXCAVATION SHALL REFLECT, THE EQUIPMENT AND METHODS TO BE EMPLOYED IN THE EXCAVATION AND WHAT METHODS WILL BE USED WHEN WET CONDITIONS ARE ENCOUNTERED REQUIRING GROUNDWATER CONTROL OR OTHER MOISTURE CONDITIONING. THE CONTRACTOR SHALL SUBMIT AN OUTLINE OF HIS EARTHWORK METHODS WHICH SHALL TAKE INTO ACCOUNT THE OVERALL CONSTRUCTION SCHEDULE. THE PRICES ESTABLISHED IN THE PROPOSAL FOR THE WORK TO BE DONE SHALL REFLECT ALL COSTS PERTAINING TO THE WORK. NO CLAIMS FOR EXTRAS BASED ON SUBSTRATA OR GROUNDWATER TABLE CONDITIONS OR MOISTURE CONDITIONING WILL BE ALLOWED.
- THE CONTRACTOR SHALL KEEP INFORMED AND THE OWNER'S REPRESENTATIVE INFORMED AT ALL TIMES AS TO A "FILL SURPLUS OR SHORTAGE" SITUATION. SHORTAGE OR SURPLUS OF SUITABLE MATERIAL AT THE CONCLUSION OF THE GRADING AND EARTHWORK OPERATION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HE WILL BE REQUIRED TO SUPPLY THE DEFICIENCY OR DISPOSE OF THE SURPLUS WITHOUT ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND OTHER DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO CUT OR FILL OPERATIONS. SUCH MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF IN A LEGAL MANNER OFF SITE.
- MATERIALS FOR FILL OR BACKFILL REQUIRED TO GRADE THE SITE AND ACHIEVE DESIGN ELEVATIONS SHALL BE EITHER ON OR OFF-SITE SOILS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS. NO TOPSOIL SHALL BE USED AS ENGINEERED FILL.
- NO FILL MAY BE PLACED UNTIL THE EXPOSED SURFACES HAVE BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND DESIGN ENGINEER PRIOR TO PROCEEDING.
- ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED AT THE OPTIMUM MOISTURE CONTENT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- NO FROZEN MATERIAL SHALL BE USED AS FILL NOR WILL ANY FILL BE PLACED ON A FROZEN BASE.
- NO ROCK OR SIMILAR MATERIAL GREATER THAN 6" DIAMETER SHALL BE PLACED IN THE FILL. UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER IN ADVANCE AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
- COMPACT FILL MATERIAL TO AT LEAST THE FOLLOWING PERCENTAGE OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR). NO DEVIATION FROM THESE COMPACTATION DENSITIES WILL BE ALLOWED UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.

FILL AREAS	% OF MAXIMUM DRY DENSITY
FILL UNDER BUILDING (EXTENDING 5' BEYOND FOOTINGS AT A SLOPE OF 1 ON 1)	98%
FILL UNDER PAVEMENT OR SIDEWALKS	95%
FILL PLACED UNDER OR BEHIND RETAINING WALLS	95%
ALL OTHER FILL	90%
- ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS, THAT WILL NOT EXCEED THE DEPTH OF LIFT. THE MAXIMUM DENSITY REQUIRED FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN THE LIFT.
- ALL AREAS WHERE FILL HAS BEEN PLACED OR THE EXISTING SOILS HAVE BEEN DISTURBED SHALL BE SUBJECT TO COMPACTATION TESTING BY THE GEOTECHNICAL ENGINEER AND SHALL BE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, OWNER AND OWNER'S REPRESENTATIVE.
- FILL MATERIAL UNDER PAVEMENTS OR STRUCTURES SHALL BE FREE OF ORGANIC OR DELETERIOUS MATERIALS. IT SHALL BE SUITABLE FOR SUPPORTING PAVEMENTS AND STRUCTURES WITHOUT ADVERSE SHRINKING OR SWELLING.
- FILL MATERIAL IN BERMS AND LANDSCAPE AREAS SHALL BE SUITABLE TO SUPPORT GROWTH OF THE LANDSCAPING MATERIALS (TYPICAL FOR THE LOCAL CLIMATE) AND AS PROPOSED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF, IN A LEGAL MANNER, ANY TREES, BRUSH OR DEBRIS THAT ARE WITHIN THE DESIGNATED CUTTING AND FILLING AREAS TO BRING THE SITE TO PROPOSED GRADES.
- THE CONTRACTOR SHALL STOCKPILE EXCAVATED MATERIAL ONLY IN DESIGNATED AREAS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- DURING THE PERFORMANCE OF SITE GRADING OPERATIONS, THE SUBGRADE SHALL BE EXAMINED CRITICALLY, AND ANY AREAS DISCOVERED WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL ENGINEER, ARE SOFT AND UNSTABLE, SHALL BE EXCAVATED TO SUCH DEPTHS AS MAY BE NECESSARY TO INSURE SATISFACTORY SUPPORTING PROPERTIES AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THESE AREAS OF EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AND SHALL BE BROUGHT BACK TO THE ELEVATION OF THE SURROUNDING AREAS WITH APPROVED FILL MATERIAL AND IN ACCORDANCE WITH THE EARTH FILL CONSTRUCTION PROCEDURE.
- NEWLY GRADED AREAS SHALL BE PROTECTED FROM THE ACTION OF THE ELEMENTS. ANY EROSION, DISPLACEMENT, OR WASHING WHICH OCCURS THAT MAY OCCUR PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION SHALL BE REPAIRED, AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.
- THE FINISHED SUBGRADE SURFACE SHALL BE SHAPED TO INDICATED PROFILES AND SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULAR SURFACE CHANGES AND SHALL BE NO MORE THAN 1 INCH ABOVE OR BELOW THE INDICATED SUBGRADE ELEVATIONS.
- THE GRADING CONTRACTOR SHALL BACKFILL ALL PARKING LOT PLANTERS AND LAWN AREAS TO WITHIN 2 INCHES OF THE TOP ADJACENT CURB GRADES. THE TOP 4 INCHES MINIMUM SHALL BE TOPSOIL, FREE FROM DEBRIS AND STONES LARGER THAN 1 INCH IN DIAMETER.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PUMPS, DITCHING, WELL POINT SYSTEMS AND OTHER MEANS FOR REMOVING WATER FROM EXCAVATIONS, TRENCHES, SUBGRADES AND OTHER PARTS OF THE WORK. THE CONTRACTOR SHALL CONTINUE DE-WATERING OPERATIONS UNTIL THE WATER HAS BEEN REMOVED ENTIRELY. UPON COMPLETION OF WATER REMOVAL, THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DRY THE SOILS, REGARD TO PROPOSED ELEVATIONS AND COMPACT SOILS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL DISPOSE OF WATER IN A SAFE AND SANITARY WAY TO PREVENT FLOODING OR INJURY TO PUBLIC OR PRIVATE PROPERTY AND SHALL OBTAIN APPROVAL AND OBTAIN COVERING AUTHORITY BEFORE DISCHARGING RUN-OFF WATER TO THEIR SYSTEM. SEE EROSION CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES AND NEW GRADES.

BITUMINOUS PAVING SPECIFICATIONS

- REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED TO BY ABBREVIATION AS FOLLOWS:
 - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
 - THE ASPHALT INSTITUTE (TAI)
 - MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (MDOT)
 - AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
- AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 902 OF THE MDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND SHALL CONSIST OF 21AA CRUSHED AGGREGATE. THE USE OF SLAG IS PROHIBITED.
- TACK COAT SHALL BE EMULSIFIED ASPHALT MEETING REQUIREMENTS OF MDOT SECTION 904, GRADE CSS-1H.
- AGGREGATE SHALL CONSIST OF CRUSHED STONE, CRUSHED GRAVEL, A MIXTURE OF UNCRUSHED GRAVEL WITH EITHER CRUSHED STONE OR CRUSHED GRAVEL, OR OTHER INERT MATERIAL HAVING SIMILAR CHARACTERISTICS. IT SHALL BE COMPOSED OF CLEAN, TOUGH, DURABLE FRAGMENTS FROM AN EXCESS OF FLAT OR ELONGATED PIECES, AND SHALL BE FREE OF ORGANIC MATTER AND DELETERIOUS SUBSTANCES AND MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATIONS, SECTION 902, 21AA. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOT 21AA MATERIAL.
- FINE AGGREGATE SHALL BE WELL GRADED FROM COARSE TO FINE AND CONSIST OF NATURAL SAND, STONE SCREENINGS, OR A BLEND OF NATURAL SAND AND STONE SCREENINGS. IT SHALL BE COMPOSED OF ROUGH SURFACED AND ANGULAR GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK AND MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATIONS, SECTION 902 FOR CLASS II OR CLASS III GRANULAR MATERIAL. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOT CLASS II OR CLASS III MATERIAL.
- ASPHALT CEMENT SHALL COMPLY WITH THE REQUIREMENTS OF MDOT SECTION 904.
- HOT MIXED ASPHALT (HMA) SHALL COMPLY WITH MDOT SECTION 501 OF STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- BITUMINOUS LEVELING COURSE SHALL BE MDOT HMA, 13A, UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION.
- BITUMINOUS WEARING COURSE SHALL BE MDOT HMA, 36A UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION. THE CONTRACTOR MAY SUBSTITUTE 13A WITH THE APPROVAL OF THE OWNER AND ENGINEER.
- THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.
- THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB-MIX FORMULAS FOR EACH REQUIRED ASPHALT AGGREGATE MIXTURE. JOB DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED BY MDOT FOR THE PARTICULAR APPLICATION.
- SUBGRADE PREPARATIONS SHALL CONSIST OF THE FINAL MAINTENING OF THE SUBGRADE IMMEDIATELY PRIOR TO PLACING THE BITUMINOUS BASE COURSE. THE SUBGRADE SHALL BE COMPACTED PER PLANS AND DETAILS. THE SUBGRADE SHALL BE TRUE TO LINE AND GRADE.
- CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED TO A DENSITY EQUAL TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR).
- BITUMINOUS CONCRETE PAVEMENT CONSTRUCTION METHODS SHALL CONFORM TO APPLICABLE PORTIONS OF SECTION 501 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- THE CONTRACTOR SHALL NOT PLACE THE AGGREGATE BASE COURSE OR THE BITUMINOUS BASE COURSE PRIOR TO THE APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
- EACH LIFT AND COURSE OF BITUMINOUS CONCRETE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER, PRIOR TO THE PLACEMENT OF A SUCCEEDING COURSE OR LIFT.
- APPLY BITUMINOUS TACK COATS ONLY WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES F. FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. CONSTRUCT BITUMINOUS CONCRETE WEARING COURSE ONLY WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F AND RISING, AND PROCEEDING COURSE OR LIFT IS CLEAN AND DRY. BASE COURSE MAY BE LAID WHEN TEMPERATURE IS ABOVE 35 DEGREES F. AND RISING AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- THE BITUMINOUS CONCRETE SHALL BE TRANSPORTED FROM THE MIXING PLANT TO THE POINT OF USE IN VEHICLES CONFORMING TO THE REQUIREMENTS OF SECTION 501 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. DELIVERIES SHALL BE SCHEDULED SO THAT SPREADING AND ROLLING OF ALL BITUMINOUS CONCRETE PREPARED FOR ONE DAY'S RUN CAN BE COMPLETED DURING DAYLIGHT, UNLESS ADEQUATE ARTIFICIAL LIGHTING IS PROVIDED. HAULING OVER FRESHLY PLACED BITUMINOUS MAT SHALL NOT BE PERMITTED UNTIL THE BITUMINOUS CONCRETE HAS BEEN COMPACTED, AS SPECIFIED, AND ALLOWED TO COOL TO ATMOSPHERIC TEMPERATURE.
- UPON ARRIVAL, THE BITUMINOUS CONCRETE SHALL BE SPREAD TO A THICKNESS NOT TO EXCEED 3-INCHES AND TO THE FULL WIDTH BY AN APPROVED BITUMINOUS PAVER. IT SHALL BE STRUCK OFF IN A UNIFORM LAYER OF SUCH DEPTH THAT, WHEN THE WORK IS COMPLETED, IT SHALL HAVE THE REQUIRED THICKNESS AND CONFORM TO THE GRADE AND CONTOUR INDICATED. THE SPEED OF THE PAVER SHALL BE REGULATED TO ELIMINATE PULLING AND TEARING OF THE BITUMINOUS MAT. UNLESS OTHERWISE SPECIFIED, THE ROLLER SHALL BE A BITUMINOUS CONCRETE SHALL BEGIN ALONG THE CENTERLINE OF A CROWNED SECTION OR ON THE HIGH SIDE OF AREAS WITH A ONE-WAY SLOPE. THE BITUMINOUS CONCRETE SHALL BE PLACED IN CONSECUTIVE ADJACENT STRIPS HAVING A MINIMUM WIDTH OF 10 FEET, EXCEPT WHERE EDGE LANES REQUIRE LESS WIDTH TO COMPLETE THE AREA. TRANSVERSE JOINTS IN ADJACENT LANES SHALL BE OFFSET A MINIMUM OF 10 FEET. WHERE POSSIBLE, JOINTS SHALL BE LOCATED AT THE LANE EDGES.
- ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING EQUIPMENT IMPRACTICAL, THE BITUMINOUS CONCRETE MAY BE SPREAD AND RAKED BY HAND TOOLS.
- THE BITUMINOUS CONCRETE SHALL BE PLACED AT A TEMPERATURE OF NOT LESS THAN 250 NOR HIGHER THAN THE RECOMMENDED TEMPERATURE OF THE BINDER PRODUCER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- THE BITUMINOUS CONCRETE MIXTURE SHALL BE THOROUGHLY AND UNFORMALLY COMPACTED BY ROLLING. THE SURFACE SHALL BE ROLLED WHEN THE BITUMINOUS MAT HAS ATTAINED SUFFICIENT STABILITY SO THAT THE ROLLING DOES NOT CAUSE UNDUCE DISPLACEMENT, CRACKING AND SHOVING. THE SEQUENCE OF ROLLING OPERATIONS SHALL BE AT THE DISCRETION OF THE CONTRACTOR.
- THE SPEED OF THE ROLLER SHALL, AT ALL TIMES, BE SUFFICIENTLY SLOW TO AVOID DISPLACEMENT OF THE HOT BITUMINOUS CONCRETE. ANY DISPLACEMENT OCCURRING AS A RESULT OF REVERSING DIRECTION OF THE ROLLER, OR FROM ANY OTHER CAUSE, SHALL BE CORRECTED AT ONCE.
- SUFFICIENT ROLLERS SHALL BE FURNISHED TO HANDLE THE OUTPUT OF THE PLANT. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS ARE ELIMINATED, THE SURFACE IS OF UNIFORM TEXTURE AND TRUE TO GRADE AND CROSS-SECTION, AND THE REQUIRED FILL DENSITY IS OBTAINED.
- TACK COAT SHALL BE APPLIED TO THE SURFACE OF PREVIOUS LIFTS AND COURSES OF BITUMINOUS CONCRETE AND TO SURFACES ABUTTING OR PROJECTING INTO THE BITUMINOUS CONCRETE.
- IMMEDIATELY BEFORE PLACING A SUCCEEDING LIFT OR COURSE OF BITUMINOUS CONCRETE THE PRECEDING LIFT OR COURSE SHALL BE CLEARED OF ANY DEBRIS OR STANDING WATER BY APPROPRIATE METHODS.
- TO PREVENT ADHESION OF THE BITUMINOUS CONCRETE TO THE ROLLER, THE WHEELS SHALL BE KEPT PROPERLY MOISTENED, BUT EXCESSIVE WATER WILL NOT BE PERMITTED.
- IN AREAS NOT ACCESSIBLE TO THE ROLLER, THE BITUMINOUS CONCRETE SHALL BE THOROUGHLY COMPACTED WITH HOT HAND TAMPERS.
- ANY BITUMINOUS CONCRETE THAT BECOMES LOOSE AND BROKEN, MIXED WITH DIRT, OR IN ANY WAY DEFECTIVE SHALL BE REMOVED AND REPLACED WITH FRESH HOT BITUMINOUS CONCRETE AND IMMEDIATELY COMPACTED TO CONFORM TO THE SURROUNDING AREA. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. SKIN PATCHING SHALL NOT BE ALLOWED.
- THE CONTRACTOR SHALL PROVIDE AT LEAST TWO ROLLERS FOR EACH PAVEMENT OPERATING ON THE WORK. THE CONTRACTOR SHALL USE ADDITIONAL ROLLERS AS REQUIRED TO OBTAIN THE SPECIFIED PAVEMENT DENSITY.

BITUMINOUS PAVING SPECIFICATIONS, CONTINUED

- THE CONTRACTOR SHALL CAREFULLY MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN SUCCESSIVE DAYS' WORK, TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING WORK. CONTRACT JOINTS TO HAVE THE SAME TEXTURE, DENSITY AND SMOOTHNESS AS OTHER SECTIONS OF THE BITUMINOUS CONCRETE COURSE. THE CONTRACTOR SHALL CLEAN CONTACT SURFACES OF SAND, DIRT, OR OTHER OBJECTIONABLE MATERIAL AND APPLY TACK COAT BEFORE MAKING THE JOINT.
 - THE CONTRACTOR SHALL TEST THE FINISHED SURFACE OF EACH BITUMINOUS CONCRETE COURSE FOR SMOOTHNESS, USING A 10 FOOT STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. A SURFACE SHALL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS.
 - LEVELING COURSE SURFACE: 1/4 INCH, PLUS OR MINUS 1/4 INCH.
 - SURFACE COURSE: 1/4 INCH
 - THE CONTRACTOR SHALL TEST CROWNED SURFACES WITH A CROWN TEMPLATE, CENTERED AND AT RIGHT ANGLES TO THE CROWN. SURFACES WILL NOT BE ACCEPTABLE IF THE FINISHED CROWN SURFACES VARY MORE THAN 1/4 INCH FROM THE CROWN TEMPLATE.
 - AFTER FINAL ROLLING, THE CONTRACTOR SHALL NOT PERMIT VEHICULAR TRAFFIC ON THE BITUMINOUS CONCRETE PAVEMENT UNTIL IT HAS COOLED AND HARDENED, AND IN NO CASE SOONER THAN SIX HOURS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
 - THE AGGREGATE BASE MUST EXTEND A MINIMUM OF 1' BEHIND THE BACK-OF-CURB OR BEYOND EDGE OF PAVEMENT WHEN NO CURB IS PROPOSED.
- ### CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS
- THESE SPECIFICATIONS SHALL GOVERN THE CONSTRUCTION OF ALL PAVEMENTS, CURB AND GUTTER, SIDEWALKS, SERVICE WALKS, DRIVEWAY APPROACHES, AND LOADING DOCK AREAS, AS INDICATED ON THE DRAWINGS.
 - REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED BY ABBREVIATION AS FOLLOWS:
 - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
 - AMERICAN CONCRETE INSTITUTE (ACI)
 - MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (MDOT)
 - AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 - THE FINE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF MDOT SPECIFICATION FOR NO. 2NS NATURAL SAND.
 - THE COARSE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF M.D.O.T. SPECIFICATIONS FOR 6AA COARSE AGGREGATE.
 - THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.
 - THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB MIX-FORMULAS FOR EACH REQUIRED CEMENT-AGGREGATE MIXTURE. JOB DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED FOR THE PARTICULAR APPLICATION.
 - CONCRETE MIX SHALL BE AIR-ENTRAINED AND PROPORTIONED TO PROVIDE THE FOLLOWING:
 - COMPRESSIVE STRENGTH AT 28 DAYS: 3500 PSI MIN., OR AS INDICATED ON PLANS.
 - TOTAL AIR CONTENT BY VOLUME: 5% TO 8%.
 - SUMP 3 INCH MAXIMUM, OR AS INDICATED ON PLANS.
 - THE CONTRACTOR SHALL AT HIS EXPENSE FURNISH SAMPLES OF FRESH CONCRETE AND PROVIDE SAFE AND SATISFACTORY FACILITIES FOR OBTAINING THE SAMPLES.
 - CONSTRUCT CONCRETE CURBING ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.
 - ALL CEMENT USED IN CURB CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.
 - WATER USED IN CONCRETE SHALL MEET THE REQUIREMENTS OF MDOT SECTION 911.
 - AIR ENTRAINING ADMIXTURE SHALL BE SELECTED FROM THE MDOT QUALIFIED PRODUCTS LIST.
 - ALL READY-MIXED CONCRETE SUPPLIERS MUST BE APPROVED BY THE OWNER AND MEET THE CURRENT REQUIREMENTS OF THE NATIONAL READY MIX CONCRETE ASSOCIATION (NRMAA). IF REQUESTED BY THE OWNER, SUBMIT A WRITTEN DESCRIPTION OF PROPOSED READY-MIXED CONCRETE MANUFACTURER, GIVING QUALIFICATIONS OF PERSONAL, LOCATION OF BATCHING PLANT, LIST OF PROJECTS SIMILAR IN SCOPE OF SPECIFIED WORK, AND OTHER INFORMATION AS MAY BE REQUESTED BY THE OWNER.
 - THE CONTRACTOR SHALL SUBMIT A STATEMENT OF PURCHASE FOR READY-MIXED CONCRETE. PRIOR TO ACTUAL DELIVERY OF CONCRETE, SUBMIT TO THE GEOTECHNICAL ENGINEER FOUR COPIES OF STATEMENT OF PURCHASE, GIVING THE DRY WEIGHTS OF CEMENT AND SATURATED SURFACE DRY WEIGHTS OF FINE AND COARSE AGGREGATES AND QUANTITIES, TYPE AND NAME OF ADMIXTURES (IF ANY) AND OF WATER PER CU.YD., THAT WILL BE USED IN THE MANUFACTURE OF THE CONCRETE. THE CONTRACTOR SHALL ALSO FURNISH EVIDENCE SATISFACTORY TO THE GEOTECHNICAL ENGINEER THAT THE MATERIALS TO BE USED AND PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF THE QUALITY SPECIFIED. WHATEVER STRENGTHS ARE OBTAINED, THE QUANTITY OF CEMENT USED SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED.
 - READY-MIXED CONCRETE DELIVERY TICKETS: SUBMIT ONE COPY OF EACH DELIVERY TICKET TO THE GEOTECHNICAL ENGINEER AND CONTRACTOR IN ACCORDANCE WITH SECTION 16 OF ASTM C94.
 - READY-MIXED CONCRETE SHALL BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH ASTM C94, AND COMPLY WITH ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE," EXCEPT AS OTHERWISE SPECIFIED HEREIN.
 - READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE POINT OF DISCHARGE AT THE JOB BY MEANS OF A READY MIX CONCRETE TRUCK.
 - NO WATER FROM THE TRUCK WATER SYSTEM OR ELSEWHERE SHALL BE ADDED AFTER THE INITIAL INTRODUCTION OF THE MIXING WATER FOR THE BATCH. UNDER NO CIRCUMSTANCES SHALL ANY APPROVED MAXIMUM WATER CONTENT BE EXCEEDED NOR SHALL THE SLUMP EXCEED THE MAXIMUM SPECIFIED.
 - DISCHARGE OF THE CONCRETE SHALL BE COMPLETED WITHIN 1-1/2 HOURS OR BEFORE THE DRUM HAS REVOLVED 300 REVOLUTIONS, WHICHEVER COMES FIRST, AFTER THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES OR THE INTRODUCTION OF THE CEMENT TO THE AGGREGATES.
 - IN HOT WEATHER (AIR TEMPERATURE 80-DEGREES F. AND ABOVE) OR UNDER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF THE CONCRETE, THE TIME SHALL BE REDUCED TO ONE HOUR.
 - CONCRETE DELIVERED IN COLD WEATHER (AIR TEMPERATURE 45-DEGREES F. AND LOWER) SHALL HAVE A TEMPERATURE NOT LESS THAN 60-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN COMPLIANCE WITH ACI 306R "COLD WEATHER CONCRETING", CONCRETE PLACING WILL NOT BE PERMITTED WHEN THE AIR TEMPERATURE IS 35-DEGREES F. OR LOWER.
 - CONCRETE DELIVERED UNDER HOT WEATHER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF CONCRETE, OR IN AIR TEMPERATURE OF 80-DEGREES F. AND OVER, SHALL HAVE A TEMPERATURE BETWEEN 60- AND 80-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN ACCORDANCE WITH ACI 305R "HOT WEATHER CONCRETING".
 - IN NO CASE SHALL THE MIXER OR TRUCK BE FLUSHED OUT ONTO THE STREET PAVEMENT, IN A CATCH BASIN OR SEWER MANHOLE, OR IN ANY PUBLIC RIGHT-OF-WAY. SEE SOIL EROSION CONTROL PLAN FOR CONCRETE WASHOUT LOCATION.
 - REINFORCEMENT BARS SHALL BE PER MDOT SECTION 905.
 - TIE WIRE SHALL BE BLACK, ANNEALED STEEL WIRE, NOT LESS THAN 16 GAUGE.

CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS, CONTINUED

- BAR SUPPORTS SHALL CONFORM TO THE BAR SUPPORT SPECIFICATIONS CONTAINED IN CONCRETE REINFORCING STEEL INSTITUTE'S (CRS) "MANUAL OF STANDARD PRACTICE." PROVIDE CHAIRS, SPACERS AND OTHER DEVICES SUITABLE FOR PROPER SPACING SUPPORTING AND FASTENING REINFORCING BARS.
- WHEN FORMS ARE USED AND THE CURB RADIUS IS LESS THAN 200 FEET, THE CURVED ALIGNMENT SHALL BE PROVIDED FOR BY EITHER STANDARD STEEL FORMS EQUIPPED WITH FLEXIBLE LINES OR BY FLEXIBLE FORMS. THE FORMS SHALL BE OF THE FULL DEPTH OF THE SECTION. CURB AND GUTTER FORMS SHALL BE SO CONSTRUCTED AS TO PERMIT THE INSIDE OF THE FORMS TO BE SECURELY FASTENED TO THE OUTSIDE FORMS.
- ALL NEW CURB SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTH AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER.
- COMPACT AND CUT-TO-GRADE SUBGRADE UNDER FORMS SO THAT FORMS WHEN SET WILL BE UNIFORMLY SUPPORTED FOR THE ENTIRE LENGTH. SECURELY STAKE AND BRACE OR TIE THE FORMS TO PREVENT LEAKAGE OF MORTAR. BRACING WITH EARTH WILL NOT BE PERMITTED.
- COAT SURFACES OF FORMS TO BE IN CONCRETE WITH A LIGHT CLEAR PARAFFIN OIL OR PARTING COMPOUND WHICH WILL NOT STAIN THE CONCRETE.
- THE INTERIOR SURFACES OF CONCRETE CONVEYING EQUIPMENT SHALL BE MAINTAINED FREE OF HARDENED CONCRETE, DEBRIS, WATER, SNOW, ICE AND OTHER DELETERIOUS MATERIALS.
- CURBING MAY BE CONSTRUCTED EITHER BY USE OF FORMS OR BY A MECHANICAL CURB AND GUTTER PAVER, PROVIDED THE REQUIRED FINISH, AND CROSS-SECTION, AND THE RADIUS OF CURB ARE OBTAINED. FORMS SHALL BE USED TO PROVIDE ONE COURSE MONOLITHIC STRUCTURE WITHOUT THE USE OF MORTAR TOPPING OR SAND-CEMENT DRY. CONCRETE SHALL BE SPADED OR VIBRATED SUFFICIENTLY TO ENSURE SATISFACTORY CONSOLIDATION.
- PROVIDE REINFORCEMENT FOR CONCRETE CURB AS SHOWN ON THE DRAWINGS. REINFORCEMENT SHALL BE KEPT CLEAN AND FREE FROM OBJECTIONABLE RUST. BENDS OR KINKS IN REINFORCING BARS SHALL BE CORRECTED BEFORE PLACING. ALL REINFORCEMENT SHALL BE ACCURATELY LOCATED IN FORMS AND SECURELY HELD IN PLACE BEFORE AND DURING CONCRETE PLACING, BY SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- THE CONCRETE CURB SURFACE SHALL BE STRUCK OFF THE REQUIRED CROSS-SECTION AND TRAFFIC LANE. THE CURB HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AND ALL SLAB EDGES ROUNDED WITH A 1/2 INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2 INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE. PARALLEL TO FORMS SO AS TO IMPART A ROUGH FINISH.
- CONTRACTION JOINTS SHALL BE CUT IN CONCRETE CURBING AT MINIMUM 10' INTERVALS. THE JOINT SHALL CUT 1/4 INCH WIDE BY 1/3 THE DEPTH OF THE CONCRETE CURB SECTION. JOINTS SHALL ALSO BE LOCATED ADJACENT TO CURB DROPS.
- ISOLATION JOINTS SHALL BE PLACED IN CURBING AT TANGENT POINTS IN CURB RETURNS AT INTERSECTIONS, AT BOTH SIDES OF STRUCTURES LOCATED IN THE CURB AND RUNS AT INTERVALS NOT EXCEEDING 400 FEET. ISOLATION JOINTS SHALL BE 1" THICK PRE-FORMED JOINT FILLER STRIPS. THE STRIPS SHALL EXTEND THE FULL DEPTH OF THE CONCRETE CURB SECTION. ISOLATION JOINTS SHALL BE PLACED IN CURB AT THE END OF EACH DAYS POUR AND WHEN ABUTTING PREVIOUSLY POURED CURB.
- THE CURING COMPOUND SHALL BE A WHITE PARAFIN BASE COMPOUND SELECTED FROM MDOT'S QUALIFIED PRODUCTS LIST APPLIED AT 200 SQ.FT./GAL.
- ALL CONTRACTION JOINTS IN CONCRETE CURB SECTIONS SHALL BE SEALED WITH EITHER HOT POURED JOINT SEALER OR COLD APPLIED JOINT SEALER.
- SLIGHTLY UNDERFILL JOINT GROOVE WITH JOINT SEALER TO PREVENT EXTRUSION OF THE SEALER. REMOVE EXCESS JOINT SEALER MATERIALS AS SOON AFTER SEALING AS POSSIBLE.
- FRESHLY PLACED CONCRETE SHALL BE PROTECTED AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT NOT LESS THAN 50 DEGREES F. NOR MORE THAN 80 DEGREES F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE PERIOD OF CURING FOR THE MINIMUM PERIOD AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE DURING CURING SHALL BE AS UNIFORM AS POSSIBLE AND SHALL NOT EXCEED 5 DEGREES F. IN ANY ONE HOUR, NOR 50 DEGREES F. IN ANY 24 HOUR PERIOD.
- COLD WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 40-DEGREES F. AND BELOW, THE CONCRETE SHALL BE PROTECTED BY HEATING, INSULATION COVERING, OR A COMBINATION OF THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT OR ABOVE 50-DEGREES F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. COLD WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 306R "COLD WEATHER CONCRETING".
- HOT WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 90-DEGREES F. AND ABOVE, OR DURING OTHER CLIMATIC CONDITIONS WHICH WILL CAUSE TOO RAPID DRYING OF THE CONCRETE, THE CONCRETE SHALL BE PROTECTED BY WINDBREAKS, SHADING, FOG SPRAYING LIGHT COLORED MOISTURE RETAINING COVERING, OR A COMBINATION OF THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE BELOW 80-DEGREE F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. HOT WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 305R "HOT WEATHER CONCRETING".
- ALL FORMS, RAILS AND STAKES SHALL BE REMOVED WITHIN 24 HOURS AFTER PLACING THE CURB. EXPOSED EDGES OF CONCRETE SHALL BE IMMEDIATELY BACKFILLED OR SPRAYED WITH CURING COMPOUND.
- AFTER COMPLETION OF CONCRETE CURBING IN AN AREA, REMOVE ALL WEATHER PROTECTION MATERIALS, RUBBISH AND DEBRIS RESULTING FROM SPECIFIED WORK, SWEEP CONCRETE CURBS CLEAN, AND SEAL JOINTS.
- ALL CEMENT USED IN SIDEWALK CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.
- ALL NEW WALKS AND CONCRETE PAVEMENTS SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTHED AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER. IN HOT WEATHER (AIR TEMPERATURE 80-DEGREES F. AND ABOVE) OR UNDER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF THE CONCRETE, THE TIME SHALL BE REDUCED TO ONE HOUR.
- CONSTRUCT CONCRETE SURFACE COURSE ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.
- SIDEWALKS SHALL PITCH TOWARD THE STREET OR AWAY FROM BUILDINGS WITH A MAXIMUM CROSS SLOPE OF 1/4-INCH PER FOOT OF WIDTH AND A MINIMUM CROSS SLOPE OF 1/8-INCH PER FOOT OF WIDTH. CROSS SLOPE DIRECTION TRANSITIONS SHALL BE ACCOMPLISHED IN LENGTHS OF 10 FEET OR LESS.
- PRIOR TO PLACING THE CONCRETE, ALL DEBRIS, STONES, DIRT, ETC., SHALL BE REMOVED FROM THE SUBGRADE. THE SUBGRADE SHALL BE MOISTENED WITH WATER IN SUCH A MANNER AS TO THOROUGHLY WET THE MATERIAL WITHOUT FORMING PUDDLES OR POCKETS OF WATER. NO CONCRETE SHALL BE PLACED ON FROZEN SUBGRADE.
- FORMS SHALL BE METAL OR WOOD AND OF AN APPROVED SECTION. THEY SHALL BE STRAIGHT, FREE FROM DISTORTION AND SHALL SHOW NO VERTICAL VARIATION GREATER THAN 1/4 INCH IN 10-FOOT LENGTHS FROM THE TRUE PLANE SURFACE ON THE TOP OF THE FORMS WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE, AND SHALL SHOW NO LATERAL VARIATION GREATER THAN 1/4-INCH IN 10- FEET FROM THE TRUE PLANE SURFACE OF THE LATERAL FACE OF THE FORM WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE. THEY SHALL BE OF THE DEPTH SPECIFIED FOR THE SIDEWALK, OR CONCRETE PAVEMENT PER PLANE AND DETAILS, AND BE SECURELY HELD IN PLACE AND TRUE TO LINE AND GRADE.
- THE CONCRETE SHALL BE DEPOSITED CONTINUOUSLY IN THE FORMS IN SUCH A MANNER AS TO AVOID SEGREGATION AND IT SHALL BE THOROUGHLY TAMPED OR VIBRATED SO THAT THE FORMS ARE ENTIRELY FILLED AND THE CONCRETE THOROUGHLY CONSOLIDATED. THE SLABS SHALL BE PLACED IN SECTIONS OR BLOCKS IN ONE OPERATION AS A MONOLITH.
- THE CONCRETE SURFACE SHALL BE STRUCK OFF TO A PLANE SURFACE WITH A STRAIGHTEDGE. AFTER THE CONCRETE HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AT ALL SLAB EDGES ROUNDED WITH A 1/2-INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2-INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE AT RIGHT ANGLES TO FORMS SO AS TO IMPART A ROUGH FINISH.
- CONTRACTION JOINTS SHALL BE PLACED AT RIGHT ANGLES TO THE EDGE OF THE SIDEWALK PAVEMENT AND TO THE SURFACE OF THE SIDEWALK. CONTRACTION JOINTS AT A DEPTH OF AT LEAST 1/4 THE SLAB THICKNESS WITH A MINIMUM DEPTH OF 1-1/4-INCHES FOR SIDEWALKS AND 3-INCHES FOR CONCRETE PAVEMENT SLABS.
- CONTRACTION JOINTS IN SIDEWALKS SHALL BE SPACED AT A MINIMUM OF EVERY 5- FEET IN 4" SIDEWALK, OR 8- FEET IN 6" SIDEWALK, OR AS SHOWN ON THE PLANS.

CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS, CONTINUED

- ISOLATION PAPERS SHALL BE OF THE PRE-MOLDED, NON-EXTRUDING, ASPHALT IMPREGNATED TYPE, NOT LESS THAN 1/2-INCH THICK. THE LENGTH SHALL BE EQUAL TO THE WIDTH OF THE SLAB, AND THE DEPTH EQUAL TO THE THICKNESS OF THE SLAB PLUS 1-INCH.
 - ISOLATION JOINTS SHALL BE PLACED AT THE FOLLOWING LOCATION FOR SIDEWALKS AND CONCRETE PAVEMENTS:
 - AT THE BACK OF THE CURB AND FRONT EDGE OF THE SIDEWALKS AND PAVEMENT SLABS ADJACENT TO EACH DRIVEWAY APPROACH AND SERVICE WALK.
 - AT INTERVALS NOT TO EXCEED 50- FEET IN ALL PUBLIC SIDEWALKS.
 - AT THE BACK OF THE CURB WHERE THE RAMPS EXTEND FROM THE KEY FLAG TO THE PAVEMENT.
 - BETWEEN THE KEY FLAG AND THE RAMP IN ALL CASES, EXCEPT WHERE THERE ARE EXISTING EXPANSION JOINTS AT THE INTERSECTIONS OF THE SIDEWALKS AND THE KEY FLAG.
 - AT ANY PLACE WHERE A SIDEWALK OR CONCRETE PAVEMENT ABUTS A BUILDING OR FIXED STRUCTURE.
 - AT ANY OTHER LOCATIONS INDICATED ON THE PLAN.
 - CONTRACTION JOINTS IN THE CONCRETE PAVEMENT WILL BE AS FOLLOWS:
 - TRANSVERSE JOINTS SHALL BE AT MAXIMUM 10-FOOT INTERVALS OR AS SHOWN ON PLANS AND DETAILS.
 - LONGITUDINAL JOINTS SHALL BE AT MAXIMUM 12-FOOT INTERVALS OR AS SHOWN ON PLANS AND DETAILS.
 - PRIOR TO APPLYING JOINT SEALER, CLEAN JOINT GROOVE OF FOREIGN MATTER AND LOOSE PARTICLES, AND DRY SURFACE.
- ### TRAFFIC LANE AND PARKING LOT MARKING
- PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL TRAFFIC LANE AND PARKING LOT MARKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
 - WORK INCLUDES, BUT NOT LIMITED TO PAINTING OF LETTERS, MARKINGS, STRIPES AND ISLANDS ON THE PAVEMENT SURFACE APPLIED IN ACCORDANCE WITH THIS SPECIFICATION AND AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - THE PAINT SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-P-115C(3), WITH OR WITHOUT REFLECTORIZED BEADS AS REQUIRED ON THE PLANS.
 - COLOR SHALL BE AS SPECIFIED ON THE PLANS OR AS FOLLOWS:
 - TRAFFIC LANE STRIPING SHALL BE WHITE OR YELLOW REFLECTORIZED, AS SHOWN ON THE PLANS.
 - TRAFFIC MARKING AND CURB FACES SHALL BE WHITE UNLESS NOTED OTHERWISE.
 - PARKING LOT STRIPING SHALL BE WHITE, UNLESS NOTED OTHERWISE.
 - HANDICAP STALL STRIPING MEETING CURRENT ADA REQUIREMENTS SHALL BE BLUE UNLESS NOTED OTHERWISE.
 - THE PAINTING SHALL BE PERFORMED ONLY WHEN THE EXISTING SURFACE IS DRY AND CLEAN, WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREE F. AND WHEN THE WEATHER IS NOT EXCESSIVELY WINDY, DUSTY OR FOGGY AND WHEN RAIN IS NOT FORECASTED FOR AT LEAST 2 HOURS AFTER PAINT IS APPLIED.
 - ALL EQUIPMENT FOR THE WORK SHALL BE APPROVED BY THE CONTRACTOR AND SHALL INCLUDE THE NECESSARY APPARATUS NECESSARY TO PROPERLY CLEAN THE EXISTING SURFACE, A MECHANICAL MARKING MACHINE, AND SUCH AUXILIARY HAND EQUIPMENT AS MAY BE NECESSARY TO SATISFACTORILY COMPLETE THE JOB.
 - THE MECHANICAL MARKER SHALL BE AN APPROVED ATOMIZING SPRAY-TYPE MARKING MACHINE SUITABLE FOR APPLICATION OF TRAFFIC PAINT. IT SHALL PRODUCE AN EVEN AND UNIFORM FILM THICKNESS AT THE REQUIRED COVERAGE AND SHALL BE DESIGNED SO AS TO APPLY MARKINGS OF UNIFORM CROSS-SECTIONS AND CLEAR-CUT EDGES WITHOUT RUNNING OR SPATTERING AND WITHIN THE L LIMITS FOR STRAIGHTNESS SET FORTH HEREIN. WHEN NEEDED, A DISPENSER SHALL BE FURNISHED WHICH PROPERLY DESIGNED FOR ATTACHMENT TO THE MECHANICAL MARKER AND SUITABLE FOR DISPENSING THE REQUIRED QUANTITY OF REFLECTIVE BEADS.
 - SUITABLE ADJUSTMENTS SHALL BE PROVIDED ON THE SPRAYER/SPRAYERS OF A MACHINE FOR PAINTING THE WIDTH REQUIRED. MULTIPLE PARALLEL PASSES TO PAINT THE REQUIRED WIDTH WILL NOT BE ALLOWED.
 - IMMEDIATELY BEFORE APPLICATION OF THE PAINT, THE EXISTING SURFACE SHALL BE DRY AND ENTIRELY FREE FROM DIRT, GREASE, OIL, AGES, DEBRIS, OR OTHER FOREIGN MATTER WHICH WOULD REDUCE THE BOND BETWEEN THE COAT OF PAINT AND THE PAVEMENT. THE SURFACE SHALL BE THOROUGHLY CLEANED BY SWEEPING AND BLOWING AS REQUIRED TO REMOVE ALL DIRT, DEBRIS AND LOOSE MATERIALS. AREAS WHICH CANNOT BE SATISFACTORILY CLEANED BY BROOMING AND BLOWING SHALL BE SCRUBBED AS DIRECTED WITH A WATER SOLUTION OF TRI-SODIUM PHOSPHATE (10% BY WEIGHT) OR AN APPROVED EQUAL SOLUTION. AFTER SCRUBBING, THE SOLUTION SHALL BE RINSED OFF AND THE SURFACE DRIED PRIOR TO PAINTING.
 - EXISTING MARKINGS OR STRIPES WHICH ARE TO BE ABANDONED OR REMOVED SHALL BE OBLITERATED OR OBBURED BY THE BEST METHODS SUITED FOR THE PURPOSE AND TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE.
 - THE CONTRACTOR IS RESPONSIBLE FOR LAYING OUT A SAMPLE SECTION OF STRIPING WHICH IS TO BE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCEED WITH THE STRIPING. THE CONTRACTOR IS TO INSURE THAT ALL SUBSEQUENT STRIPING MEETS THE QUALITY OF THE APPROVED SAMPLE APPLICATION.
 - ON THOSE SECTIONS OF PAVEMENTS WHERE NO PREVIOUSLY APPLIED FIGURES, MARKINGS, OR STRIPES ARE AVAILABLE TO SERVE AS A GUIDE, SUITABLE LAYOUTS AND LINES OF PROPOSED STRIPES SHALL BE SPOTTED IN ADVANCE OF THE PAINT APPLICATION. CONTROL POINTS SHALL BE SPACED AT SUCH INTERVALS AS WILL ENSURE ACCURATE LOCATION OF ALL MARKINGS.
 - THE CONTRACTOR SHALL PROVIDE AN EXPERIENCED TECHNICIAN TO SUPERVISE THE LOCATION ALIGNMENT, LAYOUT, DIMENSIONS AND APPLICATION OF THE PAINT.
 - MARKINGS SHALL BE APPLIED AT THE LOCATIONS AND TO THE DIMENSIONS AND SPACING INDICATED ON THE PLANS OR AS SPECIFIED. PAINT SHALL NOT BE APPLIED UNTIL THE INDICATED ALIGNMENT IS LAID OUT AND THE CONDITIONS OF THE EXISTING SURFACE HAVE BEEN APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.
 - THE PAINTS SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION. THE PAINT SHALL BE THOROUGHLY MIXED AND APPLIED TO THE SURFACE OF THE PAVEMENT WITH THE MARKING MACHINE AT ITS ORIGINAL CONSISTENCY WITHOUT THE ADDITION OF THINNER. IF THE PAINT IS APPLIED BY BRUSH, THE SURFACE SHALL RECEIVE TWO (2) COATS. THE FIRST COAT SHALL BE THOROUGHLY DRY BEFORE THE SECOND COAT IS APPLIED.
 - A MINIMUM OF ONE (1) WEEK SHALL ELAPSE BETWEEN APPLICATION OF THE BITUMINOUS SEAL COAT, SLURRY SEAL OR THE PLACEMENT OF THE BITUMINOUS SURFACE COURSE AND THE MARKING OF THE PAVEMENT. THE PAINT SHALL NOT BELED EXCESSIVELY BY CURB, OR DISCOLOR WHEN APPLIED TO BITUMINOUS OR CONCRETE SURFACES. CURING COMPOUND MUST BE REMOVED FOR THE ENTIRE WIDTH OF THE PAINTED STRIPE OR SYMBOL PRIOR TO PAINTING NEW CONCRETE.
 - IN THE APPLICATION OF STRAIGHT STRIPES, ANY DEVIATION IN THE EDGES EXCEEDING 1/2-INCH IN 50- FEET SHALL BE OBLITERATED AND THE MARKING CORRECTED. THE WIDTH OF THE MARKINGS SHALL BE AS DESIGNATED WITHIN A TOLERANCE OF 5 PERCENT (5%). ALL PAINTING SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE BY COMPETENT AND EXPERIENCED EQUIPMENT OPERATORS, LABORERS, AND ARTISANS IN A NEAT AND WORKMANLIKE MANNER.
 - PAINT SHALL BE APPLIED UNIFORMLY BY SUITABLE EQUIPMENT AT A RATE OF 0.0094 GAL./S.F. FOR STENCILS AND 0.00313 GAL./FT. FOR STRIPING. PAINT NOT USED SHALL PRODUCE AN AVERAGE WET FILM THICKNESS OF 0.015-INCHES.
 - AFTER APPLICATIONS OF THE PAINT, ALL MARKINGS SHALL BE PROTECTED WHILE THE PAINT IS DRYING. THE FRESH PAINT SHALL BE PROTECTED FROM INJURY OR DAMAGE OF ANY KIND. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE AND SHALL ERECT OR PLACE SUITABLE WARNING SIGNS, FLAGS, OR BARRICADES. PROTECTIVE SCREENS OR COVERINGS AS REQUIRED. ALL SURFACES SHALL BE PROTECTED FROM DISFIGURATION BY SPATTER, SPLASHES, SPILLAGE, DRIPPINGS OF PAINT OR OTHER MATERIAL.

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THE LOCATIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE



Burton Planning Commission

4303 S. Center Road
Burton, MI 48519

SCHEDULED

AGENDA ITEM (ID # 5205)

Meeting: 10/12/21 05:00 PM

Department: Department of Public Works

Category: Administrative Site Plan Review

Prepared By: Leandra Swayne

Department Head: Charles Abbey

F.1

DOC ID: 5205

SPR #21-49

By: Deonka Bryant
6170 Eastknoll Dr., Grand Blanc, MI

Re: 3362 S. Saginaw St., Burton, MI
Parcel #59-30-576-004, Zone C-2

For: New Business, Retail Store, Flair Boutique

ATTACHMENTS:

- Backup SPR 21-49 (PDF)



City of Burton
 Department of Public Works
 4093 Manor Drive
 Genesee County, Burton, Michigan 48519
 (810) 742-9230



APPLICATION FOR ZONING REVIEW

DATE FILED: 9-2-2021

FEE: 75

SPR #: 21-49

PLEASE PRINT

DATE: _____

APPLICANTS NAME: Deonka Bryant

APPLICANTS ADDRESS: 6170 Eastknoll Dr

APPLICANTS PHONE NO: 810-221-3410 - 810-969-8129

APPLICANTS EMAIL: deonkabryant@gmail.com

PROPOSED NAME OF BUSINESS: Flair Boutique

SITE ADDRESS: 63362 S. Saginaw St

USE OF STRUCTURE: Retail Store

SQ FOOTAGE OF PROPERTY: 1420 SF

SQ FOOTAGE OF STRUCTURE: 5680 SF

NUMBER OF EMPLOYEES/SEATS: 2

I hereby certify that the proposed application is authorized by the owner of record and that I have been authorized by the owner to make this application as his agent. I agree the statements made on the attached application are true, and if found not to be true, any permit that may be issued may be void. Further, I agree to give permission to officials of the City of Burton to enter the property subject to this permit application for the purposes of inspections.

APPLICANTS SIGNATURE: [Signature]

*** ALSO ATTACH A FLOOR PLAN OF THE EXISTING AND PROPOSED BUSINESS.

Attachment: Backup SPR 21-49 (5205 : SPR #21-49)



Burton Planning Commission

4303 S. Center Road
Burton, MI 48519

SCHEDULED

AGENDA ITEM (ID # 5206)

Meeting: 10/12/21 05:00 PM

Department: Department of Public Works

Category: Administrative Site Plan Review

Prepared By: Leandra Swayne

Department Head: Charles Abbey

F.2

DOC ID: 5206

SPR #21-50

By: 4403 Davison LLC
1985 W. Big Beaver Rd., #210, Troy, MI 48084

Re: 4403 Davison Rd., Burton, MI 48509
Parcel #59-03-400-002, Zoned C-2

For: Change of Ownership

ATTACHMENTS:

- Backup SPR 21-50 (PDF)



City of Burton
Department of Public Works
4093 Manor Drive
Genesee County, Burton, Michigan 48519
(810) 742-9230



APPLICATION FOR ADMINISTRATIVE SITE PLAN REVIEW

DATE FILED: 9-17-21

FEE: \$ 75.00

SPR #: 21-50

PLEASE PRINT

DATE: SEPTEMBER 16, 2021

APPLICANTS NAME: 4403 DAVISON LLC

APPLICANTS ADDRESS: 1985 W BIG BEAVER ROAD #210, TROY, MI 48084

APPLICANTS PHONE NO: 248-854-7616 OR 248-469 5909 (Al Zeterna)

APPLICANTS EMAIL: STK@KIOUSISLAW.COM / wuniverse@comcast.net

PROPOSED NAME OF BUSINESS: VACANT PROPERTY. NEED UTILITY REASSESSMENT

SITE ADDRESS: 4403 DAVISON ROAD, BURTON, MI 48509

PARCEL NUMBER: 59-03-400-002

TYPE: ☒ CHANGE OF OWNERSHIP/USE ☐ CONSTRUCTION LESS THAN 2%

USE OF STRUCTURE: VACANT PROPERTY. NEED UTILITY REASSESSMENT

SQ FOOTAGE OF PROPERTY: APPX 30000 SQFT

SQ FOOTAGE OF STRUCTURE: APPX 30000 SQFT

NUMBER OF EMPLOYEES/SEATS: VACANT-NO EMPLOYEES

I hereby certify that the proposed application is authorized by the owner of record and that I have been authorized by the owner to make this application as his agent. I agree the statements made on the attached application are true, and if found not to be true, any permit that may be issued may be void. Further, I agree to give permission to officials of the City of Burton to enter the property subject to this permit application for the purposes of inspections.

APPLICANTS SIGNATURE: [Signature]

*** ALSO ATTACH A FLOOR PLAN OF THE PROPOSED BUSINESS.

Steven Kiousis, Manager

Attachment: Backup SPR 21-50 (5206 : SPR #21-50)